

THE
ARCHITECT
& BUILDING NEWS

IN THIS ISSUE

- NEWALL GREEN SCHOOL
- RECONSTRUCTION IN
WESTERN GERMANY—II

NOVEMBER 5, 1953

VOL. 204

NO. 19

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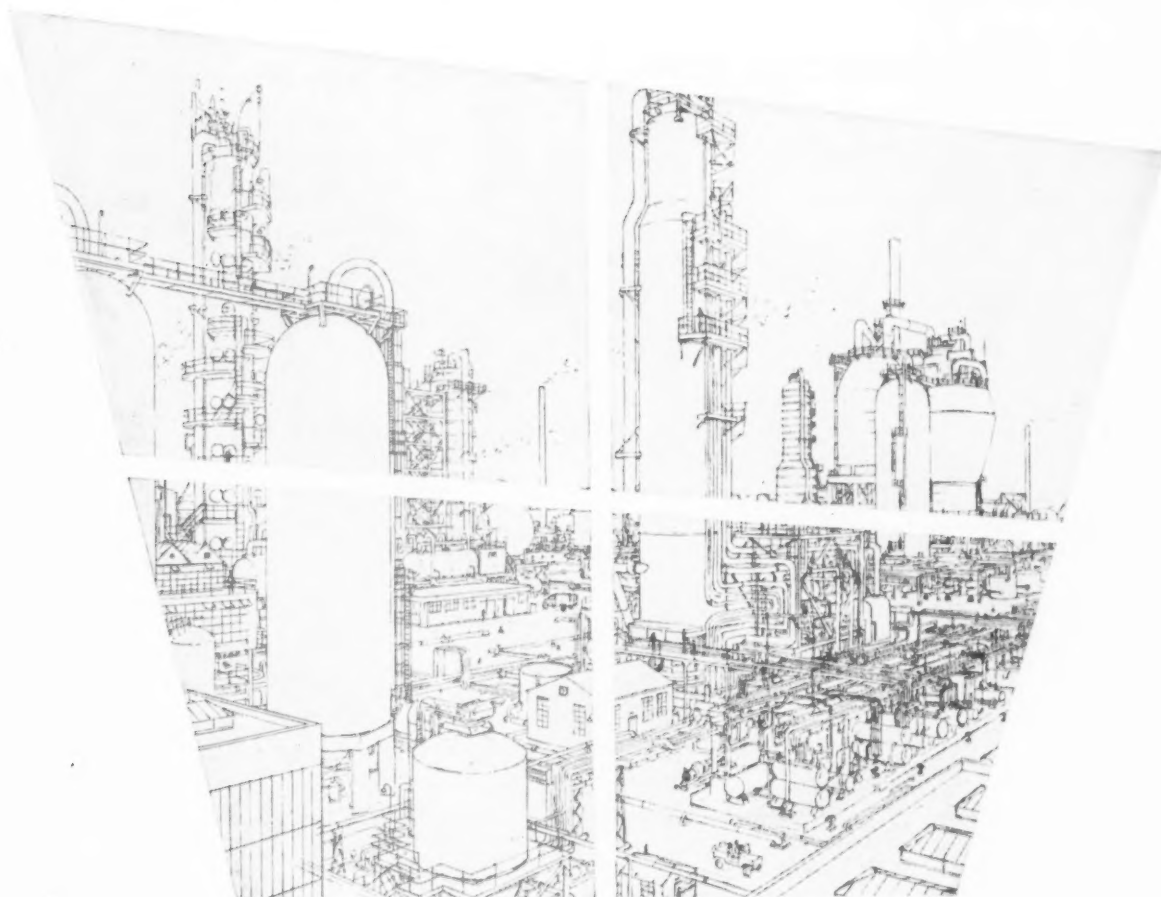
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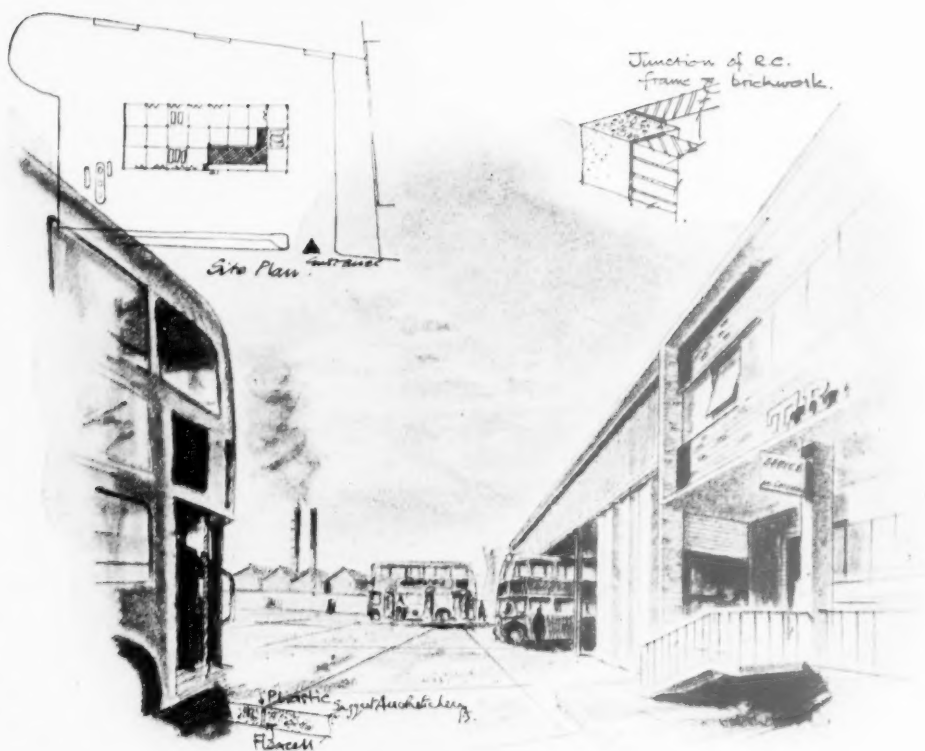
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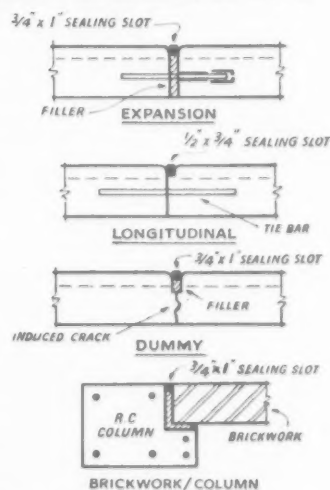


...joints like these...

SURFACE SEALS. In sealing joints which must keep out grit, etc. carried on the wheels of heavy vehicles, Pli-astic 77 rubber/bitumen compound is recommended because of its extreme toughness and good adhesion to concrete, combined with resistance to summer sun and winter frost without loss of resilience. At bus stops and where vehicles are serviced 'Aerolastic' is preferred, because of its resistance to grease and oil. Other Expandite products, 'Seelastik', 'Asbestumen', R.B.200 and Expandite Verticle Sealer have their specialised functions in the joints of structures which must accommodate not only normal movement but heavy traffic vibration as well.

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The following Government Departments exhibit:—

The Ministry of Works.	The Ministry of Housing and Local Government.
The Department of Scientific and Industrial Research.	Forest Products Research.
The Building Research Station.	Her Majesty's Stationery Office.

Features of special interest include prefabricated houses, schools, pre-stressed concrete, and many other modern developments.

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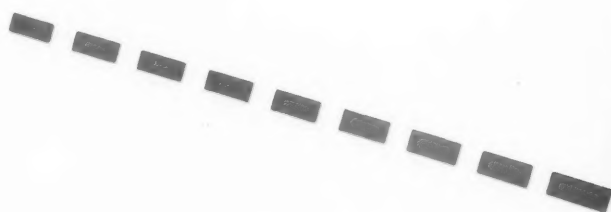
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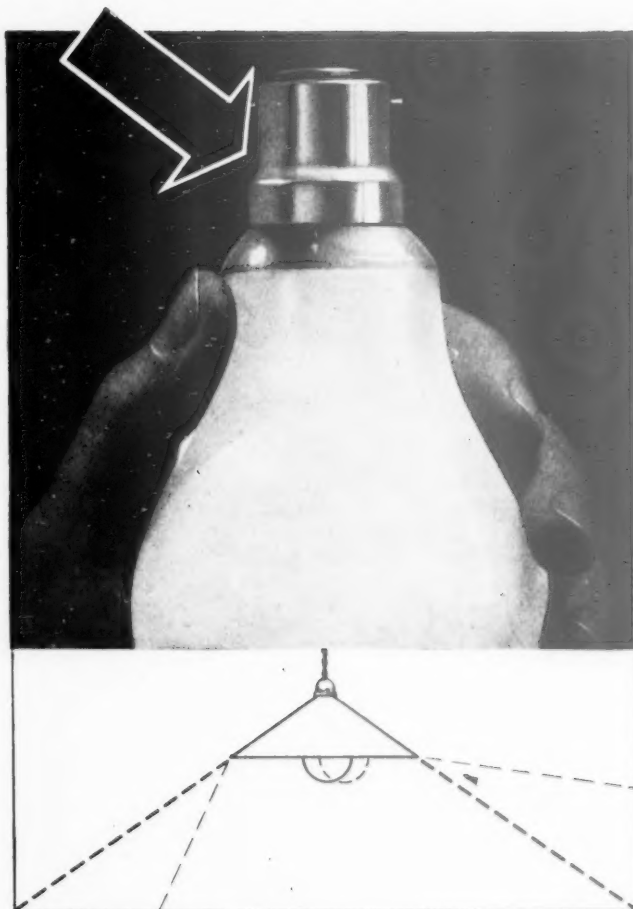
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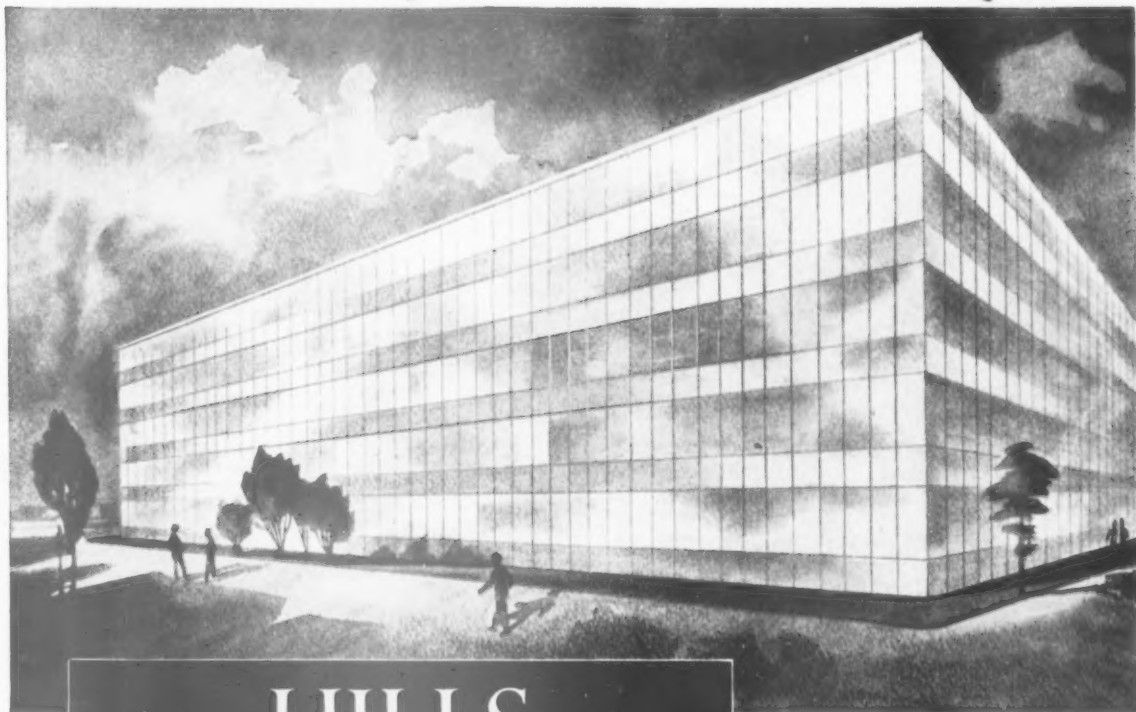
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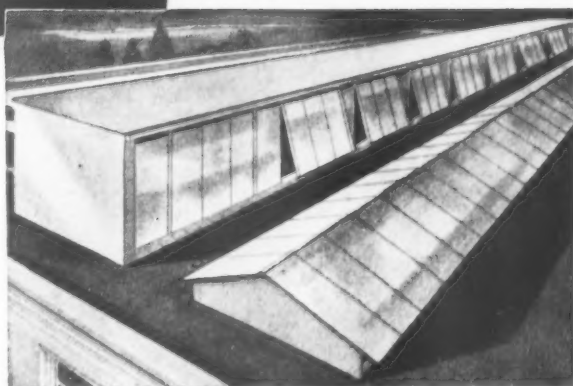


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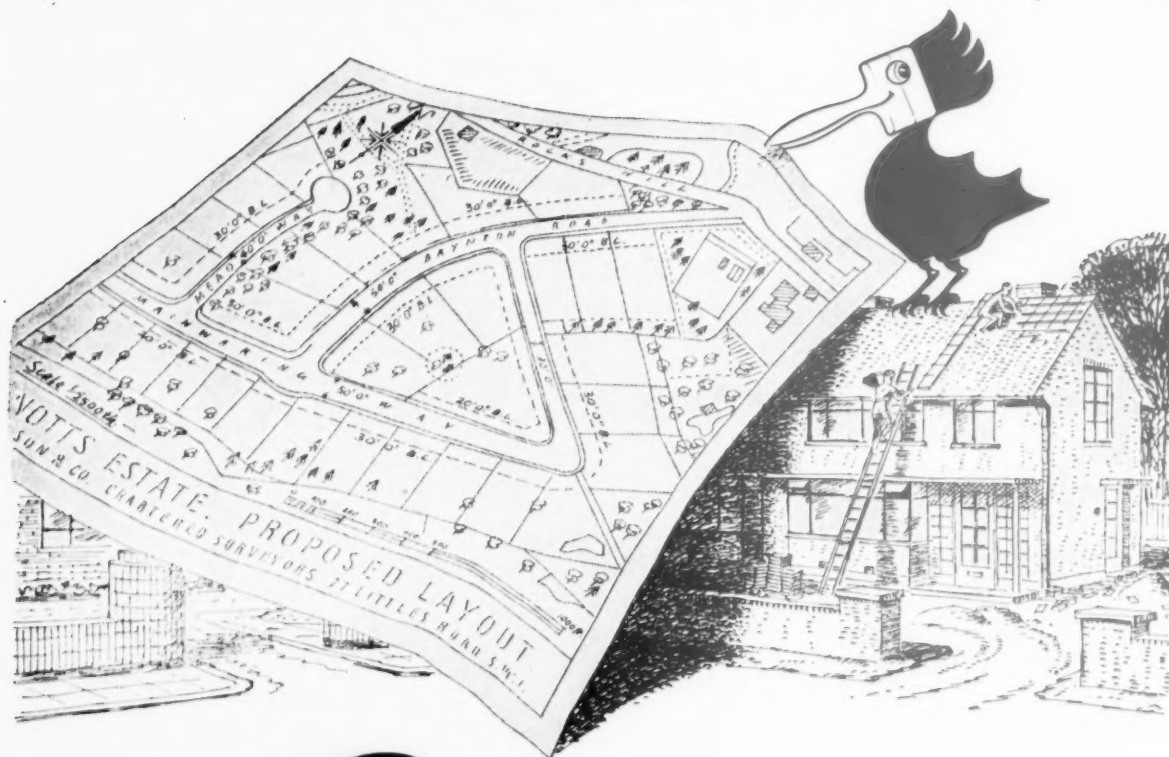


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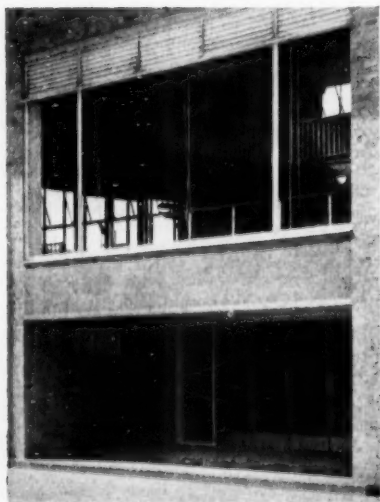
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Metal windows in Newall Green Secondary School by . . .

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These photographs of Newall Green Secondary School (designed by Leonard C. Howitt, B. Arch., Dip. T.P., D.P.A., F.R.I.B.A., M.T.P.I., City Architect of Manchester) show some of the work done by George Wragge Ltd. In addition to purpose made windows we fitted doors and balustrades and the canopy in the school kitchen, shown here. Architects or Builders who want purpose made metal windows, architectural metal work or stained glass windows of George Wragge quality should write to this address: 295, Oldfield Road, Salford, Manchester. Or telephone, Deansgate 4018.



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Architect : L. C. HOWITT, Esq., F.R.I.B.A.

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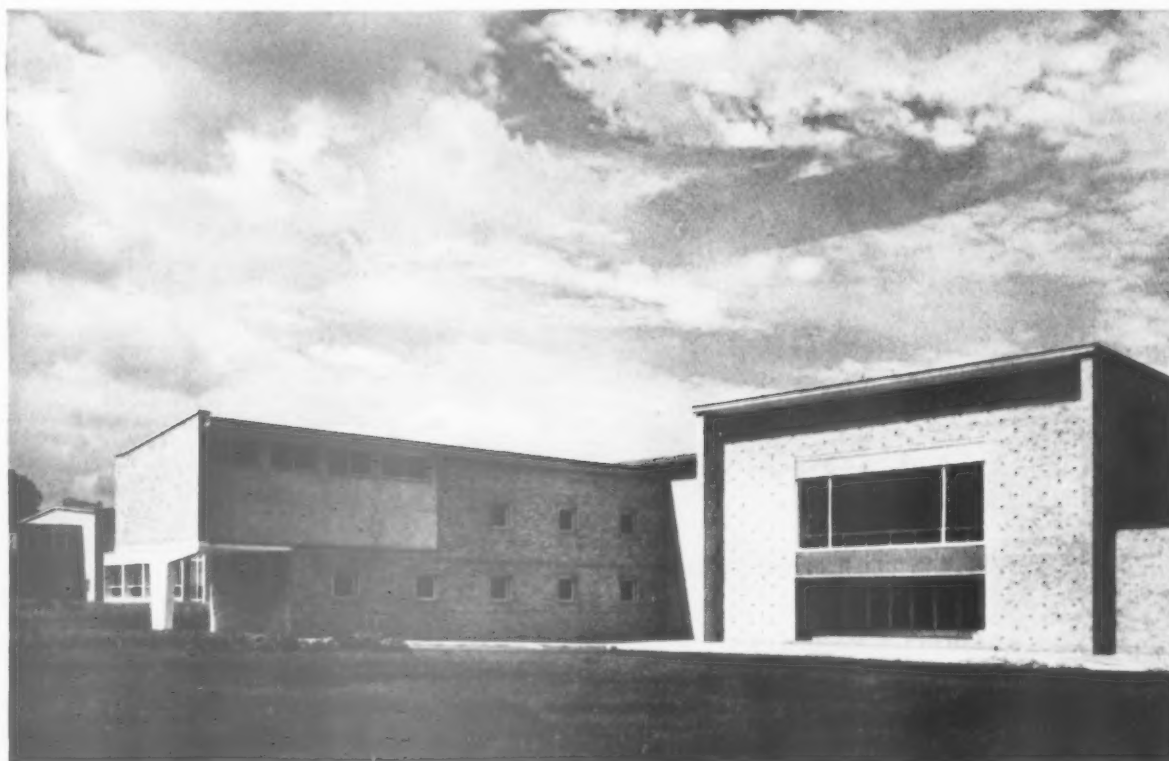
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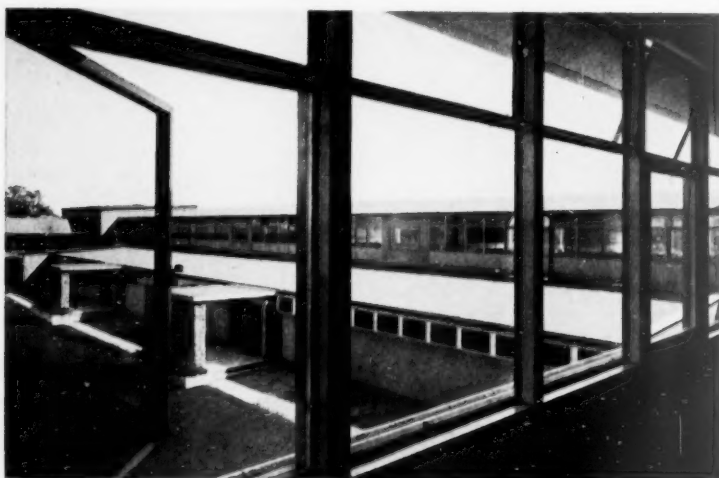
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Another "Bristol" aluminium school in Manchester

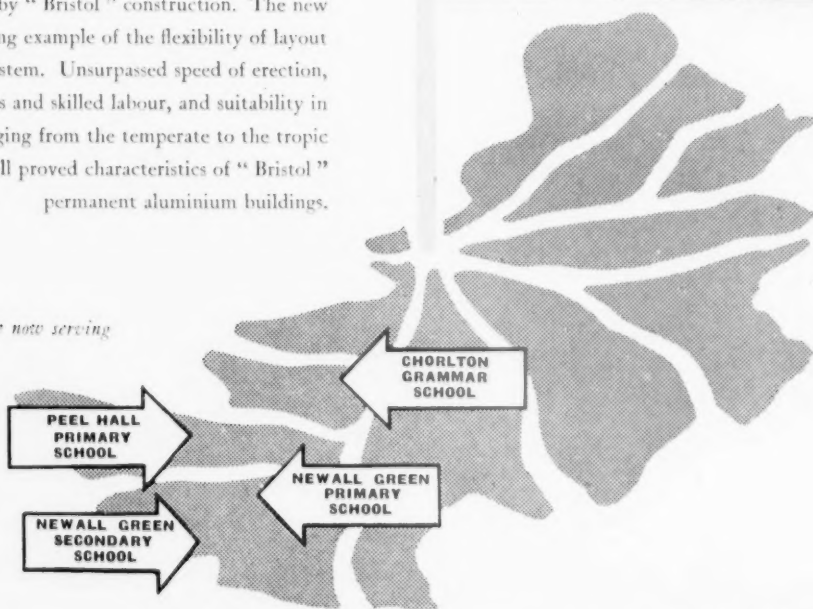


*A section of the school
viewed from the
"Bristol"-built second floor
(left) and the
attractive entrance hall (below)*



Newall Green Secondary School, latest Manchester school to employ "Bristol" aluminium components, makes effective use of aluminium units to form a spacious and airy second storey above a brickwork ground floor . . . an arrangement which combines the economies of two-storey design with the speed of erection made possible by "Bristol" construction. The new school provides a striking example of the flexibility of layout offered by the "Bristol" system. Unsurpassed speed of erection, economy in cost, materials and skilled labour, and suitability in climates ranging from the temperate to the tropic are well proved characteristics of "Bristol" permanent aluminium buildings.

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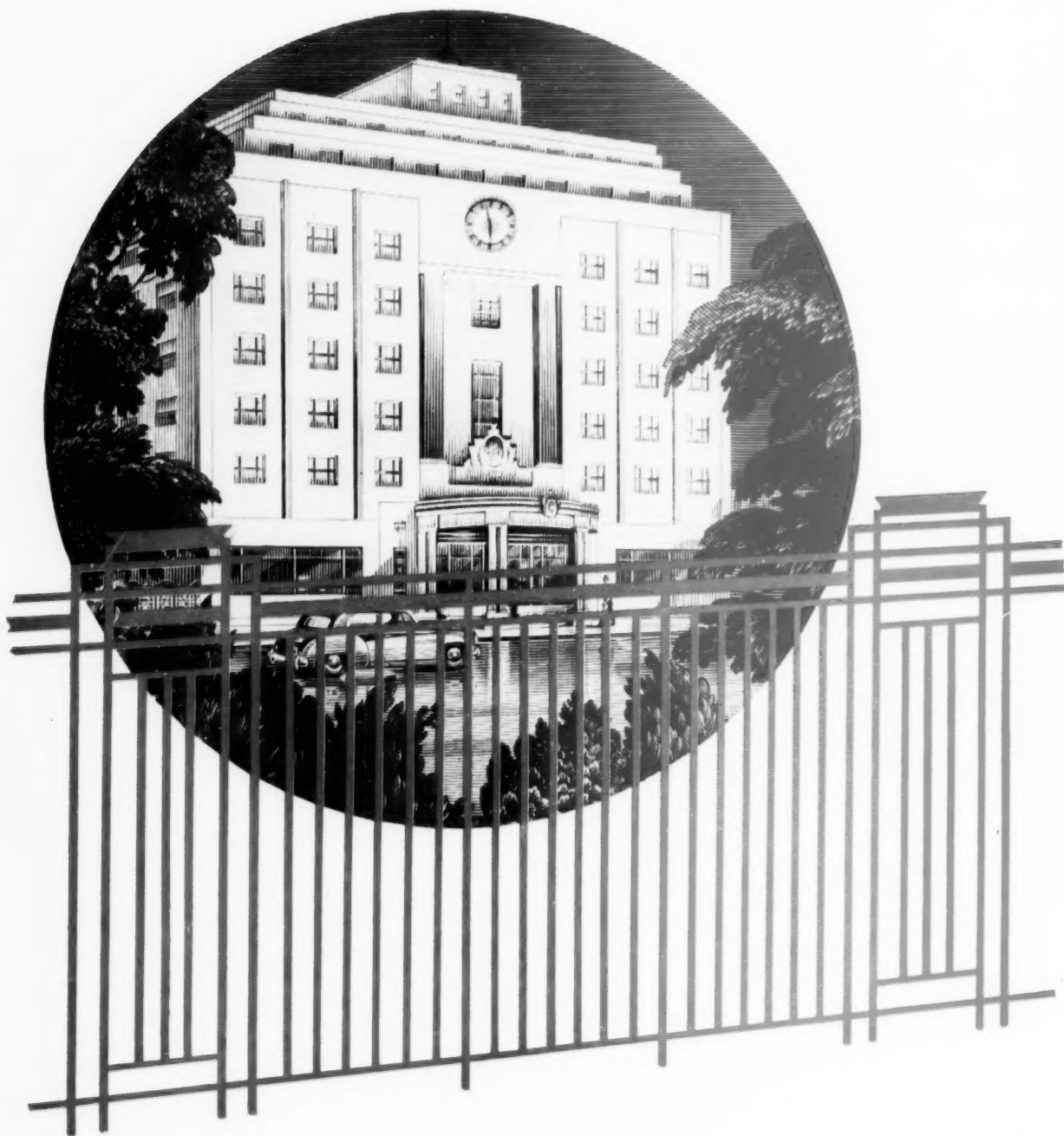
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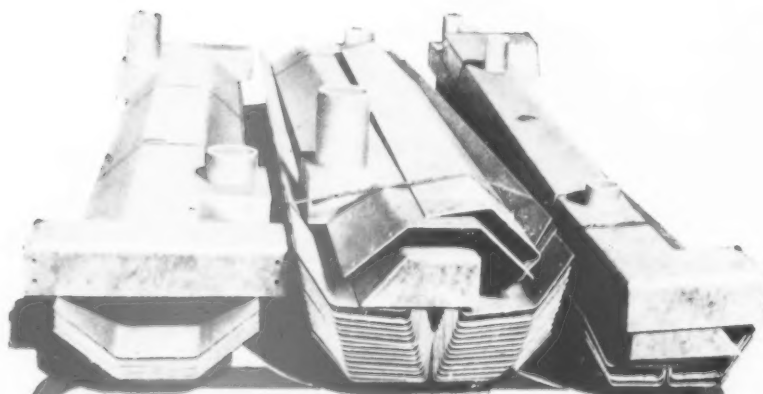
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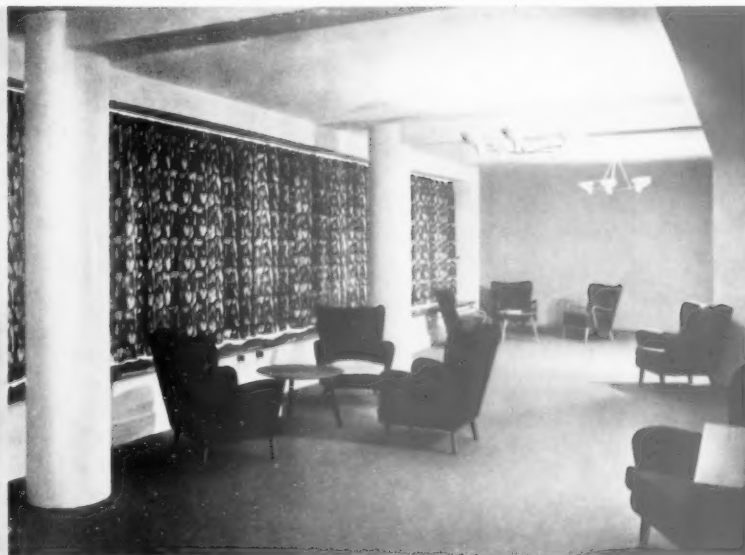
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which was specially designed, as
well as the curtains and carpets.



The Common Room, The Y.M.C.A. Indian Students' Union and Hostel, Fitzroy Square, W.1, showing the furniture and furnishings recently supplied by Heal's. The chairs have various coloured coverings, and the curtains are of Heal's exclusive design.

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A FACTORY PROGRAMME

THE issue of licences for factory construction has been greater, so far during the present year, than for some time past and if actual construction eventuates then 1954 will be a factory-building year.

The recent derationing of steel and the fact that it is now in better supply, together with the adequacy of cement supplies, make for an easier situation; the lowering of the Bank Rate and some Budget concessions have made expansion slightly more possible. The present serious shortage of bricks is not likely to affect a factory-construction programme greatly, though we wonder whether this shortage, coupled with a possible drift of labour to factory and other constructions (school reconstructions and slum clearance), will not cause a drop in the numbers of houses during the same period, 1954.

The brake on all new industrial building is provided by the time-lag which arises between first-thoughts and permission to build. It is still the business of some Government Departments to examine and to give sponsorship for any given project; it is still necessary for the Board of Trade to agree location and for the Local Authority to give planning permission with or without reference or appeal to the Ministry of Housing and Local Government and, finally, for the Ministry of Works to issue the licence.

These delays are unfortunate but, in the present state of our industrial development, the controls they imply are regrettably necessary; in order to ensure that industrial distribution and location is balanced, in order that housing is available and that common amenities are protected in the areas where constructions are proposed. If everyone thought alike, had the same regard for his neighbour, in

fact if this were nearer an ideal world, the time-lag that is complained of might be proportionately less. But the fact remains that industrial development does still take place in the wrong place and sometimes in places where adequate housing and social amenities are not available for workpeople and their families; in fact, in an unplanned way. It is interesting to note, for example, that of the factories completed since the war only a little more than one-third have been constructed within the development areas. It would be still more interesting to have such figures broken down to see which of the new works were irrevocably tied to definite locations and which were "footloose," which were new industrial ventures and which were extensions to old industries not necessarily already in the right places, and so on.

Commenting on the possible expansion next year, one financial authority says that it is likely to be financial considerations rather than the supply position or the permissive time-lags that will determine the amount of construction undertaken. Another comment has been made by an equally respected authority to the effect that it is not at all certain that new factory building is, at this time, essential for a further expansion in general output. Space, or the lack of it, has not been the chief limiting factor in production; the industrial recovery seen over the last twelve months has actually taken place without an extensive new factory programme.

All of which goes to show that there may be something in the idea that industry and transport are the first factors in any national plan for the future; but how often will the truism have to be repeated before the necessary facts are known and appreciated sufficiently to be made available for a broader policy of planning?

EVENTS AND COMMENTS

BISHOPS BRIDGE ROAD PRIMARY SCHOOL

In February, 1952, *The Architect and Building News* published drawings of this school by Drake and Lasdun. It forms part of the large and partially completed housing scheme to the west of Paddington Station. On another page you will find some progress photographs of this very interesting building. Four hundred juniors are to be accommodated in a long, curving, two-storeyed block, and 320 infants in 4 single-storeyed groups of twin classrooms. A prodigious amount of designing has gone into this school and I feel sure that it will cause something of a sensation when it is completed. The construction is a combination of very high-grade precast concrete vertical units with in situ floors and roof slab. Window walls are of metal and glass with panels of 4½ in brick internally where necessary. The architects have made the scale of both parts of the school suitable to the size of the children who will occupy them. For example, the corridors of the infants' school are only 6ft 9in from floor slab to unfinished ceiling. It is much too early to make any general remarks about the appearance of the building except to say that it incorporates a number of ideas which are new in school design.

NEW HOME FOR THE B.S.I.

For three evenings last week the B.S.I. was at home to its members so that they could see its new home at 2, Park Street, W.1. Some 2,000 persons attended. The building was originally designed by Mr. Hector Hamilton as a block of 12 luxury maisonnettes and later became better known as the "Cripps Arms" or Government hospitality centre. Under the supervision of Mr. Rowland Pierce, acting for the B.S.I., the building has been ingeniously converted by its owners in accordance with the Institution's requirements. Particular cunning has been shown in the formation of a large council room in one corner of the building. All the B.S.I.'s activities are now concentrated for the first time under one roof. The Building Section, with which we are all mostly concerned, is on the fifth floor, which it shares with the Chemical Section and the drawing office. The genial Mr. Patrick Cutbush, of course, still presides over the Building Section, and from his office window has a house agent's "view of Hyde Park" obliquely between the cliff-like walls of two buildings in Park Lane.

THE A.B.S. BALL

If you have not already bought your tickets for the architects' annual invasion of the Dorchester do so quickly for I would not like you to be disappointed. I see that it is to be the same band as usual; I do hope that it will not be the same music. Could the dances be shorter, please? Would you like to send a prize for one of the sideshows? If you cannot go to the Ball this would be a good way of helping the A.B.S. To apply for tickets or to send prizes write to Mr. C. J. Epril, 55, Pall Mall, S.W.1.

THE FUTURE OF THE FESTIVAL GARDENS

The L.C.C. had before it on Tuesday recommendations from the Parks and General Purposes Committee for the future of the Festival Pleasure Gardens in Battersea Park. Broadly speaking the recommendations are as follows. The permanent amphitheatre and tea pavilion, both rather dreary structures, are to be retained, as is the main vista of

steps and lakes less the temporary buildings. Large areas of paving are to be grassed over and a football pitch is to be laid out adjoining the large lake. The fun fair, the profit from which it is hoped will help to pay for the upkeep of the gardens, is to be reduced in area by a quarter. Eight hard tennis courts are to be provided near the boating pool and the children's zoo is to be retained. The pier, alas, because of high maintenance costs, is to be removed. This is a very great pity. I hope the plan issued with the notes is only a preliminary one for the newly laid-out areas seem to me to lack cohesion. It is a pity, too, that no open-air restaurant has been retained except the tea pavilion. How are Londoners to learn the joys of eating out of doors if the L.C.C. will not supply the means?

Let us hope that the recommendations, in spite of their shortcomings, receive the support of the council in principle; for in Battersea Park we still have a nucleus round which London's Tivoli or "The New Vauxhall Gardens" may one day develop.

A.A. PRESIDENTIAL ADDRESS

It is generally accepted that the Presidential Address at the A.A.—or anywhere else for that matter—is a serious affair; the president, one supposes after weeks of brain cudgelling, looks at the past, sums up the present and peers into the future with many an adjuration and many a wise saw. The result as often as not is that he merely reminds his hearers of their only too clearly appreciated shortcomings; the glories their fathers achieved in the past; their common guilt for the sorry state of things to-day; and the enormous efforts they must make to grasp the tremendous opportunities which to-morrow, or the next day, is bound to bring. The usual comment in the bar after such a discourse which leaves its hearers bruised and thirsty is "very sound, of course, but I want to read it in the Journal before giving a considered opinion." This means that the speaker either lost track of the paper while examining the profile of a pretty girl nearby or could not understand what it was all about anyway.

Sir Hugh Casson's address at the A.A. last week could not possibly have been further removed from the foregoing. He said that he had no views, which is his way of saying that he agrees with everyone. He professed to have an open mind about architecture and then proceeded to de-bunk five semi-imaginary characters representing a wide range of architects and designers. In what was probably the funniest presidential address ever delivered in Bedford Square he knocked down all the architectural gods one by one. This is done too infrequently in the architectural world. Underlying all the laughter there was the plain accusation that we all take ourselves too seriously and that this is one of good architecture's worst enemies. No doubt some of the more serious-minded students will deplore Sir Hugh's attitude. My advice to them is to think again and to make sure that their omission to cultivate a sense of humour does not prevent them becoming good architects with minds of their own.

The A.A. has, in its front members' room, a small exhibition of Sir Hugh's water-colour sketches. These are as attractive and observant as ever and range from views of Dublin to airfields in Africa and from the South Bank and Coronation London to the flag battery at Elsinore in Denmark where on the day Sir Hugh visited it the sentry had unaccountably hoisted the Swedish flag, or so Sir Hugh says.

ROUND THE TABLE

The C.O.I.D. has a pleasant exhibition of tableware of all sorts at the Tea Centre. Tables for all kinds of meals in all kinds of rooms, including—oh, I say—the boudoir, are set within a charming framework of polished hardwood, curtains, venetian blinds, and wall-papered panels contrived by Margaret Casson. One of the prettiest things in the exhibition is a baldachino of stainless steel saucepan lids. The exhibits are taken from the C.O.I.D. Design Review and are not all of an equally high standard, although there is much that is very good. A kitchen cabinet and a gas cooker, which are nothing like the best designed of their kind, have somehow crept in. On the way into this exhibition there is another, of baskets and basket work, arranged, with demonstrations by craftsmen, by Primavera, of Sloane Street.

"OUT OF KEEPING"

Maidstone Housing Committee is still battling on against the infiltration of contemporary architecture "of unusual appearance out of keeping with that of adjoining property." You may remember that last year Mr. John Poltock won an appeal to the Minister against the Maidstone Council's refusal to grant planning permission for a contemporary house. This time the architect is Mr. Clifford Worthington. His client says that he has provided exactly the design he required. Mr. Worthington he lie low and say nuthin', pending the public appeal, except that the Maidstone Housing Committee has not consulted the panel of architects convened for the purpose by the County planning authority.

ABNER

NEWS OF THE WEEK

Historic Buildings Councils

The Minister of Works said in the House on October 27: "I have appointed Historic Buildings Councils for England and for Wales. The Secretary of State for Scotland and I hope to announce the Council for Scotland shortly. The Chairmen and members have all been appointed in a personal capacity and not as representatives of organizations."

The list of Members is as follows:—

ENGLAND

Chairman: The Rt. Hon. Sir Alan Lascelles, G.C.B., G.C.V.O., C.M.G., M.C., M.A.

Members: The Rt. Hon. J. Chuter Ede, C.H., J.P., D.L., M.P.; Miss D. M. Elliott, C.B.E., J.P.; The Earl of Euston, M.A.; Sir William Holford, M.A., F.R.I.B.A., M.T.P.I.; Mr. Christopher Hussey, M.A., F.S.A.; Sir James Mann, M.A., B. Litt, P.S.A., F.B.A.; The Countess of Radnor; Mr. John Summerson, C.B.E., B.A.(Arch.), F.S.A., A.R.I.B.A.; Mr. W. M. F. Vane, D.L., T.D., M.A., A.R.I.C.S., M.P.

WALES

Chairman: Captain G. C. H. Crawshaw, D.L., J.P.

Members: The Marquess of Anglesey, F.R.S.A., F.S.A.; Mr. S. Colwyn Foulkes, M.Arch., F.R.I.B.A.; Mr. J. D. K. Lloyd, M.A., J.P., F.S.A.; Professor Glyn Roberts, M.A.; Mr. G. O. Roberts, M.A., M.P.

Functions of the Historic Buildings Councils

The Historic Buildings Councils for England and Wales, established under the Historic Buildings and Ancient Monuments Act, 1953, are to advise the Minister of Works on the exercise of his powers under Part I of the Act. This Part of the Act enables the Minister to make grants towards the repair or maintenance of buildings of outstanding historic or architectural interest, their contents and adjoining land, and where necessary to acquire them, or to assist the National Trusts or local authorities to acquire them.

Applications for Financial Aid

Applications under Part I of the Historic Buildings and Ancient Monuments Act for financial aid to buildings of outstanding historic or architectural interest should be addressed to:—

Buildings in England

The Secretary, The Historic Buildings Council for England, Lambeth Bridge House, Albert Embankment, London, S.E.1.

The Secretary of the English Council is Mr. C. D. E. Keeling (Ministry of Works).

Buildings in Wales and Monmouthshire

The Secretary, The Historic Buildings Council for Wales, at either St. Agnes Road, Gabalfa, Cardiff, or Lambeth Bridge House, Albert Embankment, London, S.E.1.

The Secretary of the Welsh Council is Mr. C. D. E. Keeling (Ministry of Works), and the assistant secretary is Alderman A. Manley (Central Office for Wales, Ministry of Works).

The Modular Society

The Modular Society held its first annual general meeting at the Royal Society of Arts on Wednesday, October 28, with Sir Alfred Bossom, Bt., in the Chair. A constitution was adopted that provided for incorporation as a company limited by guarantee. Sir Alfred Bossom, Bt., was elected as first president, and the following were elected to the Executive Committee:—C. H. ASLIN, C.B.E., F.R.I.B.A., County Architect, Hertfordshire.

W. A. BALMAIN, B.Sc., A.R.I.C., Joint Managing Director, Uni-Seco, Ltd.

D. A. BIRCHETT, A.R.I.B.A., Company Architect, Shell Mex & B.P., Ltd.

A. S. BYTHWAY, Managing Director, Thermacoust, Ltd.

David CARTER, Director, Carter & Co.

R. Llewelyn DAVIES, B.A., A.R.I.B.A., Director and Architect, Nuffield Investigation.

Capt. J. FOX-WILLIAMS, M.C., M.A., Managing Director, Williams & Williams, Ltd.

Donald FRASER, Managing Director, F. Troy & Co., Ltd.

Peter GARDINER, A.M.I.Struct.E., Managing Director, Gardiner, Sons & Co., Bristol.

L. GEIGER, Director, Jayanbee Joinery, Ltd. (nominated by The English Joinery Manufacturers Association, Inc.).

D. Dex HARRISON, F.R.I.B.A., A.M.T.P.I.

E. D. HINCHLIFFE, A.M.I.Struct.E., Director, Hills (West Bromwich), Ltd.

J. M. HOLT, London Manager, Pilkington Bros., Ltd.

R. A. Sefton JENKINS, B.Sc., A.C.G.I., A.M.I.C.E., A.M.I.Struct.E.

A. H. T. JOHNSON, Editor of *Building*.

G. LAURENCE, General Manager, Sussex and Dorking United Brick Co., Ltd. (nominated by The National Federation of Clay Industries).

Herbert J. MANZONI, C.B.E., City Engineer and Surveyor, Birmingham.

J. C. PRITCHARD, Director and Secretary, The Furniture Development Council.

G. W. RAYBOULD, Joint Managing Director, Holoplast, Ltd.

Richard SHEPPARD, F.R.I.B.A.

William E. TATTON BROWN, M.A., A.R.I.B.A., A.M.T.P.I., Deputy County Architect, Hertfordshire.

Mark Hartland THOMAS, O.B.E., M.A., F.R.I.B.A., M.S.I.A.

R. T. WALTERS, A.R.I.B.A., A.M.I.Struct.E., Dipl. Arch. (L'pool), British Railways, Eastern Division.

F. R. YERBURY, O.B.E., Hon. A.R.I.B.A., Director, The Building Centre.

The following subscription rates were agreed to:—Students: 5s. Individual members: £2 2s. Special Group subscription: £5 5s. Industrial subscription (minimum): £10 10s.

The first public meeting of the session will be on Wednesday, December 16, in the evening, at the Royal Society of Arts.

(Continued on page 530)

PROGRESS : L.C.C. PRIMARY SCHOOL, BISHOPS BRIDGE

Fig. 1. The Junior School from South-east; infants' classrooms in the foreground.

Fig. 2. Erection of precast mullion.

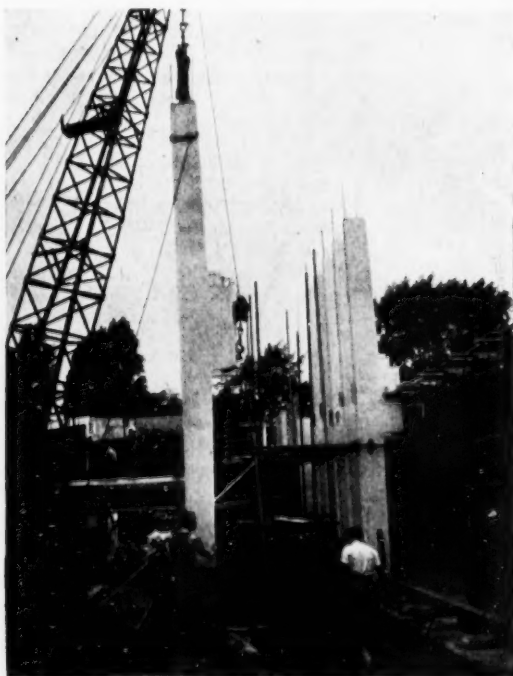
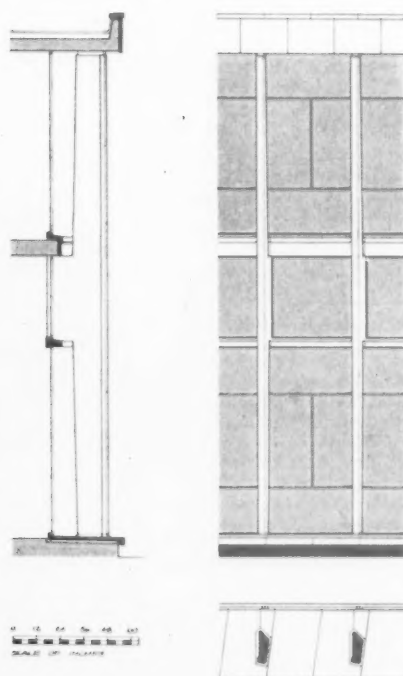


Fig. 3. Relation of precast mullions to structure.



ROAD, PADDINGTON

architects :

DRAKE & LASDUN,**OVE ARUP & PARTNERS**

structural engineers

A PREVIEW of this school was published in the *Architect and Building News* issue February 14, 1952. It forms an integral part of the Bishops Bridge Road Housing Scheme by the same architects. The pictures on these two pages illustrate part of the reinforced concrete structure.

The detail photograph of the south side of the Junior school (Fig. 4) shows the precast concrete mullions supporting first floor and roof and the intermediate precast concrete transoms. Glazing and external walling is clear of the structure. The cornice and corner wall of the gable end is structural reinforced concrete shuttered and clad with precast concrete slabs. Obscured coloured glazing is used in the lower panels of each window on the outside. The base apron units are not in position in the picture.

Each precast concrete mullion is cast in one piece with Portland Stone finish (Fig. 5). The mullions are cast with lifting hooks and projecting reinforcement to tie into the concrete structure at first floor and roof. Mortices are cast for precast intermediate transoms. Each precast concrete mullion is erected by crane (Fig. 2) on to precast concrete bases placed in position to receive them. The relation of the precast mullions to the structure and apron units is shown in the drawing (Fig. 3). Mullions are shown in position in Fig. 5; in this case the typical detail varies to take the edge beam of the first floor dining-hall.

Allen Fairhead & Sons, Ltd., are the general contractors. Wates, Ltd., are subcontractors for the precast concrete work.

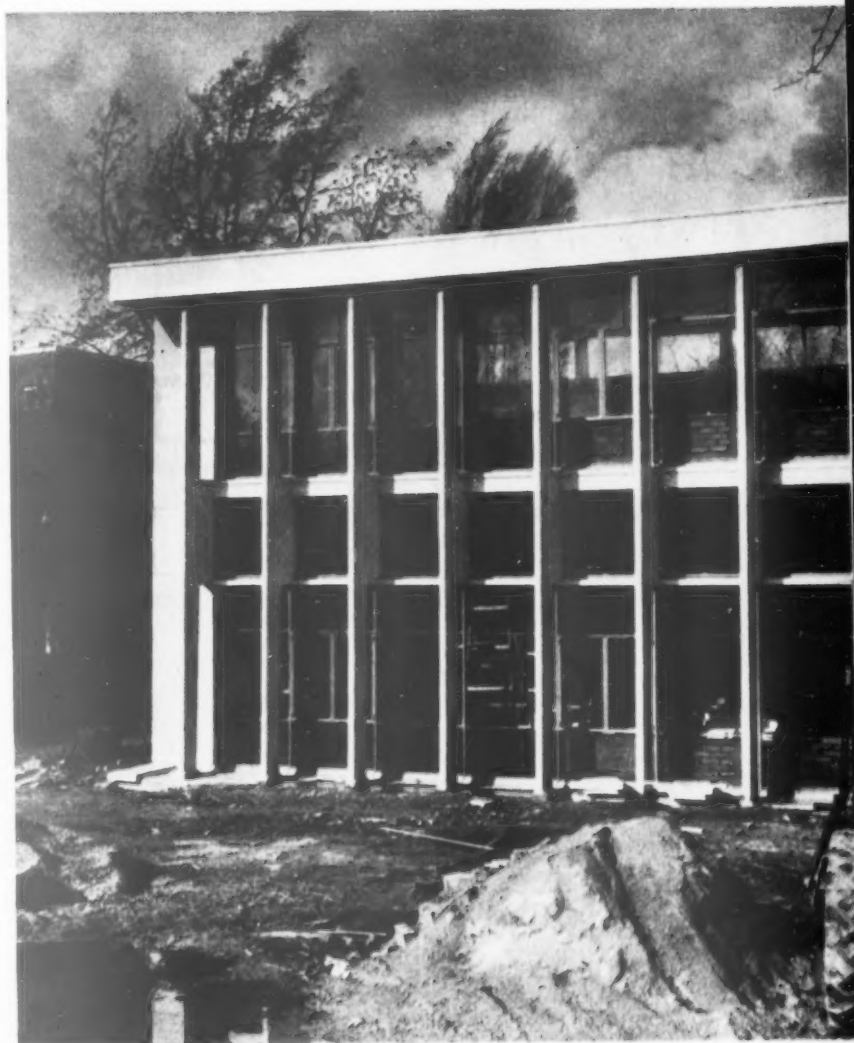
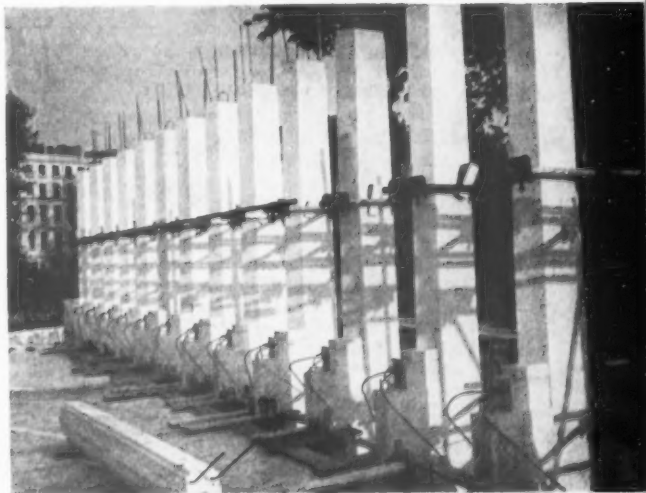
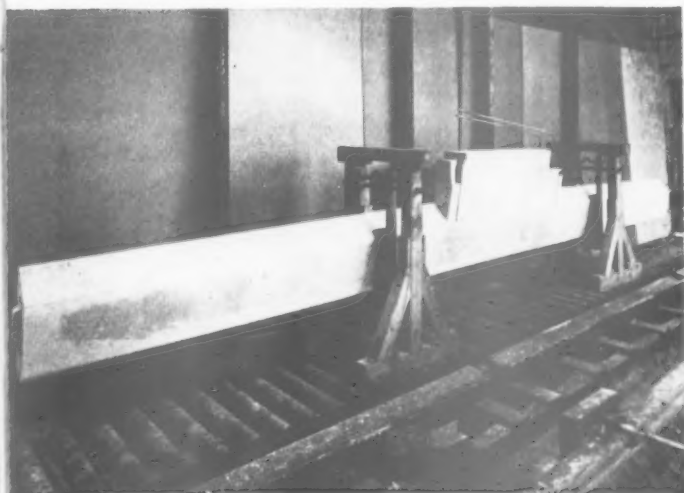


Fig. 4. South side of Junior school.

Fig. 5. Mullion cast at Messrs. Wates' factory.

Fig. 6. Mullions in position; first floor level.



IN PARLIAMENT

Freedom the Goal

Sir David Eccles, Minister of Works, informed Mr. Nabarro that the value of new industrial buildings over 5,000 sq ft (exclusive of iron and steel and fuel and power projects) completed in the years 1951 and 1952 was £96 millions and £69 millions respectively. The Department's figures showed a considerable increase in the corresponding work licensed in 1953, especially since the last Budget, but he had no means of estimating how much work would be done in 1954, although he had no doubt it would show a substantial increase.

He added in further replies that the Control of Building Operations Order, which limits licence-free industrial building to £2,000 a year, expires on December 31, and he was considering what licence-free limit should be prescribed in the new Order. The ultimate goal was the abolition of industrial building licensing, subject to some control in overloaded areas. That was also the ultimate goal in relation to all forms of building, but he thought industrial building came first. So far as he was aware no industrial licences had been refused anywhere in the United Kingdom since last April. (Oct. 27.)

Mr. Henry Strauss, Parliamentary Secretary to the Board of Trade, stated in answer to Mr. Russell that further simplification of the procedure of licensing for factory building and extension was under consideration.

Stone Building Report

Mr. Patrick Maitland asked the Secretary of State for Scotland what action he proposed to take in the light of the report of the Department of Scientific and Industrial Research about the stone-building industry.

Mr. Henderson Stewart, Under-Secretary, said that this survey was carried out at the request of the Scottish Council (Development and Industry), and the Secretary of State expected to receive shortly the comments and recommendations of the council. He would, of course, discuss them with the Minister of Works. Meantime, the summary of the report published by the Stationery Office had no doubt been closely studied by quarrymasters, architects and builders.

Delays in the City

Mr. G. Wilson asked the Minister of Works what time limit was attached to the priority licences granted for rebuilding office and other accommodation in the City of London, in view of the fact that in several cases no start had been made. Sir David Eccles said there was no such limit. In fact his advice to building owners was not to press for work to start until plans had been fully prepared. Mr. Wilson suggested that delay in starting work for which priority licences had been granted caused delay in the granting of

further licences to others who were ready to start. Was it not a scandal that the City of London should make such slow progress in rebuilding compared with other cities at home and abroad? Sir David Eccles said that Mr. Wilson should have sympathy with people who had been waiting a long time for licences and had felt it unwise to spend money on architects' drawings when they were not sure they would get a licence. Most of these were large projects, and it was in the interest of swift completion that these plans should be properly prepared before work began. They had learned the lesson from this that they must give the next batch of licences rather earlier. (Oct. 27.)

CORRESPONDENCE

New Elizabethan Homes

To the Editor of A. & B.N.

Sir,—After reading Abner's comments this morning on the *News Chronicle* book "New Elizabethan Homes," we went out at lunch time to buy a copy with high hopes that at last one of these "popular" offerings on architecture had something worth while to show us.

Frankly, sir, we are nauseated and horrified to a degree we did not think was possible. Let us say straight away that in the bones of most of the plans there are undoubtedly some good points, but when one looks at the elevations and then is treated to the so-called artist's perspectives, which would have caused raised eyebrows in first year at a School of Architecture, one realizes that incalculable harm may be done in misleading the public into accepting some of these designs as good contemporary architecture.

The architects who created the designs must be taken as a good representative cross-section, and yet many of them flaunt openly things which have been accepted as clichés for years. "Planned with a winding stairway," says one with pride. We seem to remember being told in first year at our respective schools of architecture to avoid winders at all costs. Having ploughed through the designs, we have some real horrors as suggested interiors—we feel the bathroom at the foot of page 85 deserves a special mention.

Many other points, particularly the general layout of the publication, are deserving of criticism. The arty crafty way of presenting the architects on pages 26 and 27 is poor; much better to have put each architect with his (or her) own design.

Finally, the point which upsets us most is that the whole thing gets a pat on the back with a message from the P.R.I.B.A., thereby setting the official seal of approval on this very inauspicious contribution to the housing problem.

We are, etc.,

D. E. COWLEY, Dip.Arch.(Birm.),
A.R.I.B.A.;

R. D. BUTTERELL, B.Arch.(Lpl.).

British Standards Institution

Sir Roger Duncalfe has been elected President of the B.S.I. in succession to Viscount Waverley. Mr. Bruce Martin, A.R.I.B.A., A.A.Dip.(Hons.), has been appointed a member of the B.S.I. technical staff, Buildings Section, and will lead an investigation into the application of modular co-ordination to building practice.

OBITUARY

The death occurred last week-end of Anthony Charles Tripe, F.R.I.B.A., of Messrs. Tripe and Wakeham, architects.

Exhibition of Contemporary Spanish Architecture at the Building Centre

The above Exhibition, which was unavoidably postponed, will be open to the public from Tuesday, November 3 to Saturday, November 21, 1953—9.30 p.m. to 5 p.m., Saturdays 1 p.m.

COMING EVENTS

The Royal Institution of Chartered Surveyors.

November 9 at 5.30 p.m. Ordinary General Meeting. Presidential Address by G. A. Coombe, M.C., F.R.I.C.S., at 12, Great George Street, Westminster, S.W.1.

November 10 at 6 p.m. Sessional Meeting. Talk on "Fluorescent Dimming Circuits," by H. H. Ballin and W. J. Vine, at the Wellcome Research Institution, Euston Road, N.W.1.

The Architectural Association.

November 11 at 6 p.m. Talk on "London Airport," by Frederick Gibberd, which will be inspected during the A.A. visit arranged for November 14. At 34, Bedford Square, W.C.1.

London Master Builders' Association.

November 11 at 2 p.m. Annual visit of the President of the London Master Builders' Association, Gerald A. Hill, M.I.O.B., who will be supported by the Director, G. H. A. Hughes, O.B.E., F.R.I.C.S., F.I.Arb., at Derry & Tom's Restaurant, Kensington High Street, W.8.

The Royal Sanitary Institute

November 11 at 2.30 p.m. Discussion on "Air Pollution and the London Fog of December, 1952," to be opened by E. T. Wilkins, M.Sc., Ph.D., a Principal Scientific Officer of the Fuel Research Station, Dept. of Scientific and Industrial Research. At 90, Buckingham Palace Road, S.W.1.

Students Planning Group

November 12 at 6.30 p.m. Talk on "Some Aspects of Survey in Civic Design," by Max Lock, F.R.I.B.A., M.T.P.I., at 28, King Street, Covent Garden, W.C.2.

THE PRESIDENT'S INAUGURAL ADDRESS

Extracts from the Address given by

Mr. HOWARD ROBERTSON, M.C., A.R.A., P.R.I.B.A., at The Royal Institute on November 3

MY address, as you will shortly discern, is an expression less of fact than of strictly personal impressions and thinking. I am permitted on this occasion to speak as an individual, aware that a large body of opinion within this Institute will disagree with me, but there have been many things on my mind, things which concern us all, and if I put some of them before you to-night it is because I am coming to you on the basis that a patient comes to a psychoanalyst. Just let the patient relax and go on talking, and perhaps he will feel some relief as a result.

First, I want to speak about the sort of architecture which represents the main stream of our present-day output. By that I mean the buildings which rank for illustration in our technical Press and architectural books. Broadly speaking, it ranges from the neo-Georgian to those buildings which are abreast of all up-to-the-minute developments here and abroad. I am purposely oversimplifying to make my point.

And now I am going to try to be constructively critical, and suggest that in a great deal of this work certain deficiencies are being revealed. Not technically but aesthetically.

To come straight to the point, I feel that our contemporary buildings for all sorts of purposes risk to become too much alike in their expression; the same formula for design, employing the same motives, basic forms, and treatment of façade in mass and detail is widely applied to all problems. Of course, variations of treatment exist in plenty, and size and bulk play their part. But, broadly speaking, the buildings for various purposes are getting to resemble each other astonishingly, and so is the work of many architects whose basic thinking is on rational parallel lines. This applies both to the neo-Georgians and the Extremists. Each in their category are acquiring the family face. In many architectural schools the same thing happens, but to a more extreme degree; though, of course, the neo-Georgian trend is in many of the schools practically non-existent.

What has happened becomes, I think, more apparent when one looks back at the work of the more distant past, particularly on the spot and not in photographs. There one sees that the best old work reveals immense personality, a character developed in the handling and treatment of form which springs from some deep root of feeling about architectural art. Great daring and technique are often exhibited, and risks were taken that are truly surprising in relation to the methods, materials, and the resources of the epoch. But the technique was not as a rule the mainspring of inspiration, and was seldom flaunted for its own sake. The designers of those buildings felt something and felt it deeply. They had a certain grandeur in their approach, even to quite small things. Their sense of response to human emotion seems to have been both natural and acute.

They had something of what a born orator or a preacher possesses, an ability to touch the chords and stir the emotions, the sort of basic warmth which is found in the music of the favourite classic composers. Perhaps the gift was there subconsciously, absorbed from the spirit of the age those people lived in. But, however it came to exist, this ability to make the form and treatment of buildings communicate an emotion, a sensation, has indubitably been present in all great periods. And it is something quite different from the astonishment and wonder of a great engineering enterprise and achievement, although it is in some cases allied to it.

I believe these great successes of the past move people to-day in a genuine way, and not merely because the buildings are old. They say something in stone and brick to which people instinctively respond. These buildings very often come to be beloved by anyone ranging from anti-

quarians to our latest Royal Gold Medallist, who has proclaimed himself at heart a traditionalist.

Clearly there must have been economic troubles in those days as well as now, though perhaps both Church and State and the great patrons were willing to stretch a point where our own Ministries and Local Authorities would merely whistle the Treasurer out of his kennel to bite the architect on the leg. In other words, we cannot claim that a certain brittleness, uniformity and desiccation which show signs of attacking our contemporary architecture are entirely due to lack of funds, though austerity has certainly bred a habit of mind which is comfortably defensible.

Through oversteering of engineering, false pride in structure, over-anxiety to follow my latest leader, reluctance to draw upon the great and rich vocabulary of form and surface of the past, we risk to produce an architecture which will finally cease to attract the public, and will be respected chiefly for its neatness and tidiness—the very qualities which can be found in a well-designed mechanism. Fine qualities, but in architecture insufficient.

By and large, people seem always to seek in music a theme, and never cease to love a tune. Let all of us architects remember that. If the young architect can discover what it is that lies at the core of the vitality of the best work of the past and the present, he will be much farther advanced than he would be by wobbling between the rigidities of Chicago and the latest extravagances from Brazil. The subject is a vast one. It should properly be included in the "Delight" section of a theory treatise. And so, having scattered these thoughts to the winds, I now pass from architecture to architectonics, from the art itself to the system of some of the many things which control our professional life.

The Architect's Dilemma

"Professional." I have used the word automatically. But there are people, important people, who would invite us to quit our professional status and step boldly out into the commercial world. There has been considerable speaking and writing on this subject, and some of you may have read and remembered an able article in "The Economist" of July 25 this year, entitled "The Architect's Dilemma." In this article the writer says that "the idea of the architect as standing between the owner and the builder is of doubtful relevance to the needs of a new age." He also says that "to reassert his leadership, it is held, the architect must again become the master builder, a man with a technical training adequate to make him practical and at home in modern technical developments."

I believe that the first thesis is unsound, because it is premised on the idea that this is, in fact, a new age, whereas I think it is only a stage in the usual evolution, accelerated no doubt, but not necessarily demanding the abandonment of fundamental principles which in this particular case are the very basis of our service to the community. Sound principles, in architecture or in business, are established by long experience of trial and error. Attacks on these principles are never dormant. But if we are convinced of their soundness we would be mistaken to abandon them because we thought the world had changed. Superficially it may have; but fundamentally the professional classes have always stood for trust in accordance with inviolable codes. Architects as a bulwark against malpractice would soon disappear if they tied themselves irrevocably to commercial interests and abandoned their independent status.

This is not to say that the field within which we work should be unduly circumscribed. We should be in a position to render the fullest service to industry and com-

merce as well as to our normal clients. The means for achieving this, within the framework of our basic principles, is a matter for sympathetic examination individually and by our Institute. If the principle is right, we should be able to find a way, and "The Economist" is justified in suggesting that we must adapt ourselves. But not to the extent of throwing overboard our ethical charter.

On the second point of "The Economist," the architect becoming again the master builder, the man with the adequate technical training, one might reply that nowadays there is no such person as the master builder. There are impressive firms of contractors, organizations with directors at the top, keen-faced men in bowlers half-way down, and at the base huge teams of men who dig, run miniature railways, and operate the bulldozers and those machines that claw up a whole tree and deposit it just where the architect one moment before was standing. The nearest to the idealized master builder is probably the smaller family concern, or the all-round country builder. But that can hardly be what "The Economist" had in mind.

"Master builders" to-day are teams of men embracing many departments. The architect is at their service, if they want him. No single man in the master builder's firms knows everything about the job. The strength of such firms, apart from their finance, is the quality of the directors and the employees. These firms are business organizations that build. It is their lifetime job, and it takes all their time. They are not fitted to do architects' work, and they know it. No more can architects do their work. Designing and planning and supervising are one thing, and the great organizations employing labour for erection are another. Only people unfamiliar with what actually occurs, and must occur, in building practice could confuse the two issues, apart perhaps from dreamers who are bemused by the lure of the very words "Master Builder" and the visions they conjure up.

To turn to the point of the architect and his adequate technical knowledge, the real facts are that no single architect could possibly retain, even if he could absorb, the full range of present-day techniques. But the architect, *vis-à-vis* his client, is a man with a balanced firm behind him. In that architect's house are many architects of varied qualifications. That is where the strength lies, exactly as it does with the builders.

It is perfectly fair to say that an active practising architect to-day knows as much about technology as any human brain can hold without the risk of stultifying imagination. It is, broadly, a certainty that excessive factual cramming is a deterrent to creation. And even some of the most imaginative engineers are men who have willingly become a little hazy over detail and calculations. But they have the great ability to spot what is fundamental, and go for first things first. That is what a good architect should do and does, and it is, in fact, the key to the success of many of the greater names in architecture to-day; namely, an ability in certain fundamental directions, the awareness of their own limitations, and the capacity to engage qualified collaborators.

It has been suggested that the answer to highly efficient design and building is early collaboration between architects, builder, engineer and quantity surveyor. I believe this to be true, particularly for large or complicated buildings. At least one public authority is trying out a pilot scheme along these lines, and we will surely find that others will investigate this method which does not necessarily preclude competition. But I do not believe that the American type of "package service," with everything provided, including design, will be the ultimate answer in this country. After a time I think the "package" will be found, like certain Christmas hampers, to include increasingly some things which are not too good. And since all service must be paid for somehow, I do not see a real reason for not

selecting the best of each in the open market, which is the basis of our present system.

Efficient collaboration in all sections of our work is, I am sure, the best answer to efficient design and supervision. Specialist consultants have a great and growing contribution to make, and if they were of no use, they would soon cease to exist. No trade firm can quite replace them, and the fact that they are kept hard at work from beginning to end of complicated jobs shows that for these they are really required. Furthermore, as technology advances, they present the advantage of being able to suggest mixtures of systems of construction and mechanical services which can easily save more than their fees in addition to giving a more economical and much smoother-looking job.

A great deal of work, in terms of money, may be represented by consultants' work in a large contract. A heavy responsibility therefore lies at their door, in the effort to reduce the cost of building by an ever-increasing efficiency and constant regard for the clients' pocket—and here one is assuming that the best consultants need no reminder of this fact.

But the question of arranging employment and payment for consultants is not in every case satisfactorily solved. Our scale provides for it, but clients, particularly public bodies, tot up the total of the professional fees and find them very large. So they often want to dispense with consultants. A commercial firm will be quite willing to pay a very high cost for a pattern or a special design, but in individual building it is not sufficiently recognized that a design is often, in fact, a prototype and nearly always special. In the vast majority of cases the money spent on fees secures a worthwhile economic service. The question is how to ensure that this axiom be more widely adopted.

Our scale of fees provides in a readily workable way for the remuneration of consultants, and though many minds have considered the possibilities of alternatives, there has been no solution offered which is free from drawbacks.

One suggestion that has been put forward on many occasions is that the architect should be able to quote an all-in fee to include all consultants which the project can justifiably require. Immediately there is a difficulty, in that the fee for all-in service would almost certainly be higher. On the other hand, some business clients might not object to this, provided that it eliminated all those extra additions which one is bound to ask for at present.

Further, there will be certain buildings for which full consultant service is not required, and so immediately would be introduced another complication, namely, a variable in the all-in fee.

The whole thing bristles with difficulties; which is not to say that they are insoluble. One suggestion is that we should consider a scale whereby we classify our work in categories, starting, perhaps, with simple utilitarian non-fire-proof buildings, housing, etc., and passing through two categories such as halls, libraries, simple commercial buildings, schools for higher education and town halls, medical centres and complete industrial buildings respectively to end up with a category of buildings of exceptional character requiring great skill in design and prolonged study in development. In this category one might place, for example, the majority of hospitals.

These various categories would be A, B, C, D, and the architects' fees would be based on the category and the expenditure within that category, or in other words, fees would be graduated. Any difference of opinion with a client as to category would probably have to be settled by an Institute ruling, transmitted where necessary by an Allied Society. The exact classification of building types might prove to be difficult in practice, and yet it would be useless unless it were generally accepted. For the moment one is excluding small domestic buildings and the partial service that may be all that is required for some of them, as being

a category probably best dealt with separately. The basic idea of fees on classification and cost is not wholly new, and I believe that a fee scale along these lines has been recommended by a joint committee of architects of New England, U.S.A. It is always conceivable that fees based in this way on different building types, the service requirements for which can vary widely, might be a practicable and fair basis for arranging an all-in rate, to the satisfaction of the architect, the services consultants, and the clients, with the advantage that all could visualize where they stand without endless arguments about who pays for what. I have touched on this matter of fees as an illustration of the kind of problem which is always in front of the Institute. We have to watch trends and developments, and adjust ourselves to them, and at the same time not make impulsive and drastic changes without being certain where we are going. Which is really to say that basic questions like the scale have to be kept alive and under constant review like all other important matters of Institute policy.

To move now to the purely business side of the profession, the private architect who has to finance his office is greatly handicapped by a system of taxation which makes no provision for ploughing back funds to carry his future commitments. Tax and super-tax are paid in full by each partner, and the available working capital is provided by the back-log of fees still owing. The salaried or official architect does not face this particular brand of anxiety.

It has sometimes been averred that the private architect is at a disadvantage in the service he can render as compared with his officially employed brother in that he does not dare to experiment with new methods and materials. This is true to the extent that if a private architect has a local failure in the one job handed out to him, he may not get another, and prudence suggests that he acts the more cautiously in consequence. The official architect with a large programme can follow up certain lines of research and venture upon a few experiments, since any disappointments are absorbed in the large field of successful buildings. Of course, his responsibilities are very heavy, and his difficulties and frustrations not to be minimized, but at least he has sound finance behind him. If the Tucker Report, or some other enquiry, could make equitable recommendations for the case of the private professional man, one might find that he, too, would take greater risks, more could be spent on research and development, and ultimately a still more skillful service could be rendered.

The Private Architect

The increase in the number of salaried and official architects has been fairly steady; they number more than half our membership. But one thing to my mind is certain, namely, that if the private architect were to disappear the standard of recruiting to big public offices would be adversely affected over the long term. Private architecture is an excellent nursery for young architects, one reason being that responsibility is direct, and the scope extremely varied, while contact with the seniors is in most cases personal and intimate. And the private architect has not only to execute work, he must seek it and find it. That is a very salutary condition for the development of initiative and enterprise, and the young architect who watches a practice develop is truly in touch with the realities of a very competitive world.

In stating this belief I am in no way decrying service in public office, either as assistant or principal, for such service presents opportunities which are often unrivalled. And we must not fall into the error of neglecting such questions as the general conditions of service of salaried and official architects as well as their full representation in all Institute affairs. There is little danger of our doing so, though on the surface it may sometimes appear that the problems of the private architect are receiving first priority. This is

almost certainly due to a general feeling that the field of private architecture is subject to encroachment from several directions, and at all costs should be cultivated and protected as an excellent training ground and as a necessary complement and stimulus to public service.

To keep private architects alive and flourishing, it is, of course, desirable that they should share to a reasonable extent in the programmes of the State, especially in times of restriction and control, and tribute has rightly been paid on many occasions to the furtherance of this principle by official architects and the public bodies whom they advise.

But the private architect has to be active in his own interests, and it is by no means easy for him to bring his talents and service to the notice of his possible clients. The Institute Council, through its recent publications and exhibitions promoted by the Public Relations Committee in particular, has shown itself to be well aware of the need for publicizing the cause of good architecture, and has followed with interest the action taken by such sister bodies as the American Institute, which has decided upon a campaign of publicity for the profession which will cost a good deal of money, and is funded by its members.

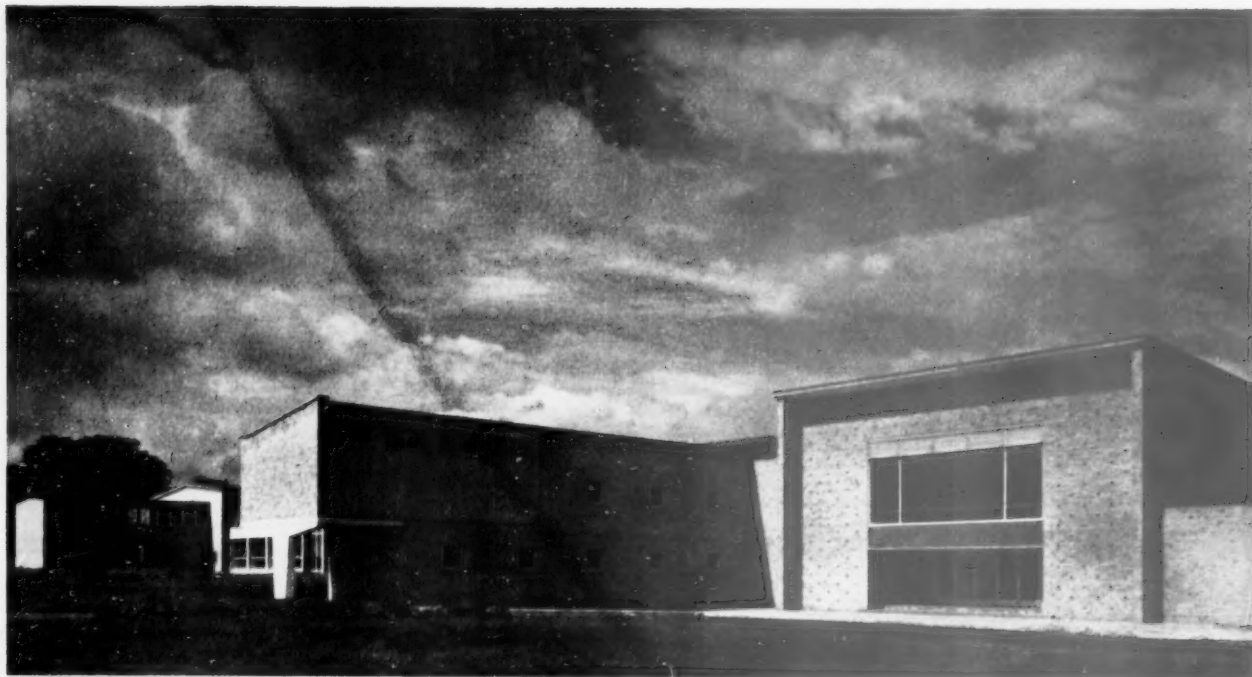
Our conditions here are somewhat different, the great size of the United States requiring special measures. But the interesting fact remains that a greater degree of publicity is considered desirable, and there we are surely in agreement, as our exhibitions and other publicity measures amply demonstrate.

Many of us consider that the soundest bid for popularity is the combination of excellent service at fair rates and buildings whose appeal is founded on a broad basis, buildings agreeable in themselves and mindful of their surroundings even if sometimes at the expense of personal aesthetic convictions.

There are many recent but little-known buildings in this country, well designed, though with a modesty of expression which is better appreciated in reality than in photographic reproduction. Such buildings cannot always be afforded space in the technical press, and this is perfectly understandable. But their existence should be known at headquarters, with their authors' names, so that, when opportunity arises, they can be brought to the attention of those who seek guidance in selecting an architect; but also, and more important, in order that the Institute can have available the material to draw upon for its public relations work generally, and especially in proclaiming the high standard of work throughout the country well executed but unfortunately little known.

That is why we have promoted a scheme for asking our members to contribute photographic and documentary examples of their work, freely chosen by themselves but with no obligations on the part of the Institute as to the use which will be made of this material. But implicit in this invitation to our membership is the belief that, by having available an up-to-date collection of this kind, we can advance the interests of architects in general.

It is on this note that I wish to end. All of us architects, salaried, official, private, belong to one architectural world. If I have dwelt at considerable length on certain problems of the private architect it is because he is the man who, at the moment, appears to have the more clouded future. Our profession must remain unified in its devotion to architecture, and all the while all our problems, all the architect's dilemmas, have to be received, studied and solved through the machinery of this Institute. This task involves, I am sure you will agree, most exceptional demands on the human material of our Secretariat. I think you will also agree that this material has so far shown not the faintest sign of either fatigue or deterioration. But while it has no moments of inertia, we must not forget that there is such a thing as a limit of elasticity.



General view of the main entrance, with Administration block on left

Newall Green Secondary School, Wythenshawe

LEONARD C. HOWITT, B. Arch., Dip. T.P., D.P.A., F.R.I.B.A., M.T.P.I.
City Architect, Manchester

THE school—a three-form entry mixed secondary modern school—was opened in the summer of this year.

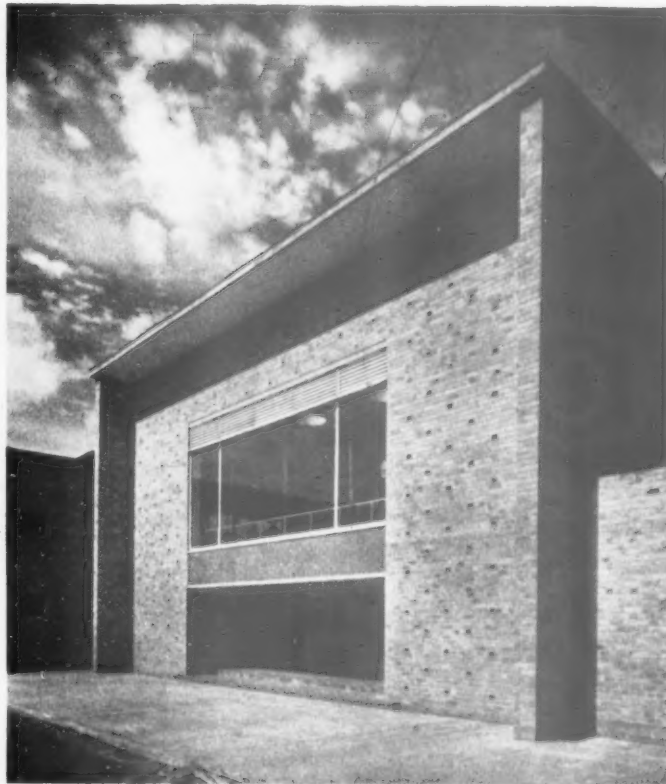
The building was designed at the time when the elongated plan form was considered to have advantages which compensated for increased costs. This type of plan required an open site and the result on a bare site was frequently dull and straggly.

In this case, however, the existence of a tree-fringed pond combined with skilful use of materials and colour, both inside and out has produced a very impressive building which offers interesting views from practically every angle externally and some remarkably fine internal effects which are enhanced by the use of excellent colour schemes.

The building is a combination of traditional brickwork and prefabricated aluminium construction: the latter enlivened by colour with grey, yellow and blue predominating. The speed of erection of prefabricated classrooms, which are only produced in single-storey blocks, has been combined with the economics of two-storey construction by placing the aluminium prefabricated structure on the first floor above the brickwork ground floor.

The main entrance façade is textured by the introduction of dark ended headers in the golden brown brick surface and by the use of Westmorland slate in a relatively small panel over the entrance.

In the playground at the back of the building texture and relief is provided by cobbled paths running between stone-built, pergola type, porches of secondary entrances. Internally the most striking feature is the triple flight main



The Main Entrance

staircase off the low ceilinged entrance lobby. The delicate appearance of this stair is increased by the slender white balustrading which is thrown into relief against walls of differing darker colours.

A secondary staircase leading to the art room has similar grace. Here white balusters stand out with great vividness against a dark blue wall. Natural lighting is from a curved ceiling consisting of alternate prestressed concrete beams and strips of glass brick. The underside of the concrete beams are painted bright red. Lighting fittings are sprayed primrose. Similar roof construction is used in the art room.

Throughout the building colour—and very fine colour at that—is in evidence with here and there, at focal points, a well-designed wallpaper.

Wall finishes generally are hard plaster with gloss or emulsion paint finish. Flooring materials include magnesite, woodblock, quarry tiles, terrazzo tiles and, on upper floors, cork carpet or cork tiles on foamed slag screed.

Off the main entrance lobby and approached through glass swing doors is the curved dining hall which overlooks the pond with its wooded fringe. The assembly hall, too, opens on to this area.

Above the main entrance is the library with its full-length gallery approached by spiral staircase.

Classrooms are lit from both sides. The total floor area of the school is 57,450 sq ft with an area per place of 112 sq ft. The school is designed for 450 pupils at a cost per place of £326.

The contract price was £166,520 and the total cost of furnishing £15,800.

S. G. B. ROBERTS, A.R.I.B.A.,

Deputy City Architect

W. E. HUMPHREY, A.R.I.B.A.,

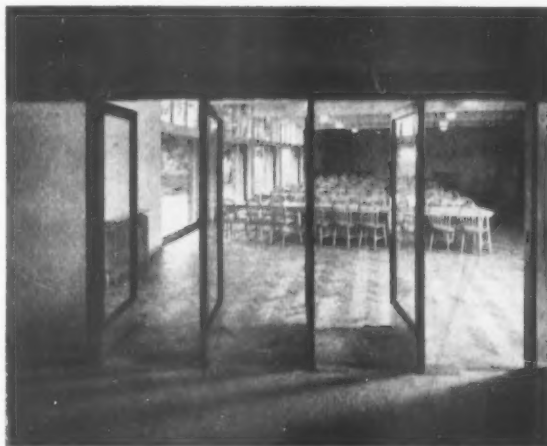
Chief Assistant Architect (Education)

C. DAVIES, M.A., A.R.I.B.A.,

Senior Assistant Architect

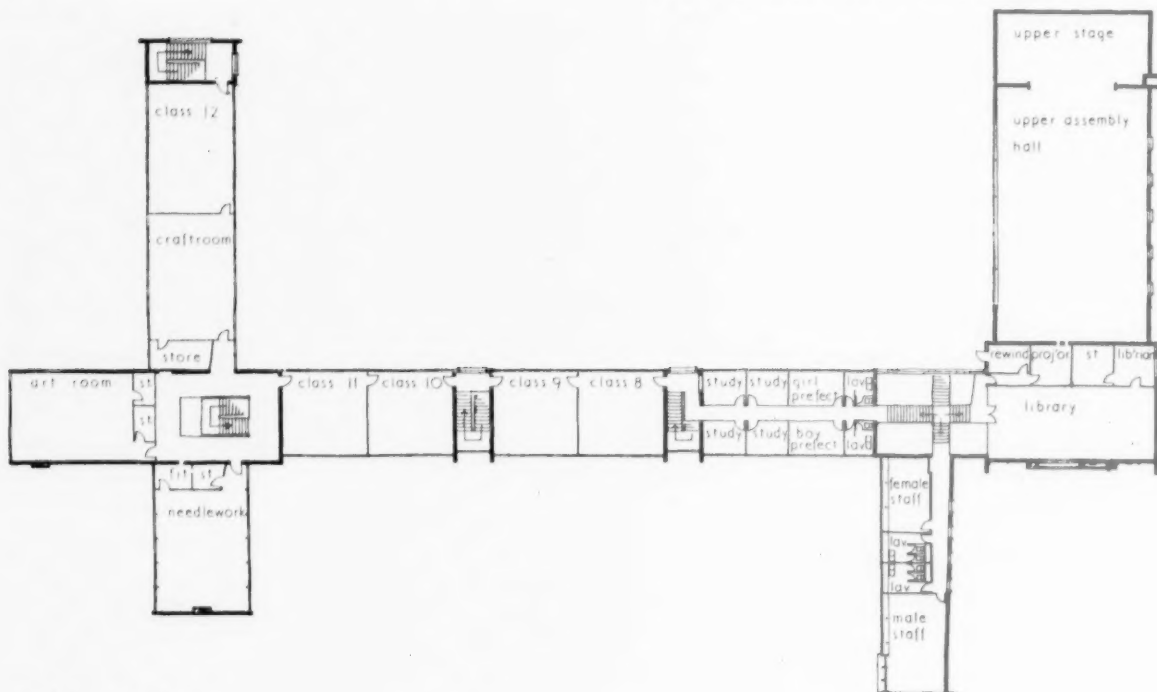


A typical classroom. Floors are laid with cork carpet on foamed slag screed.

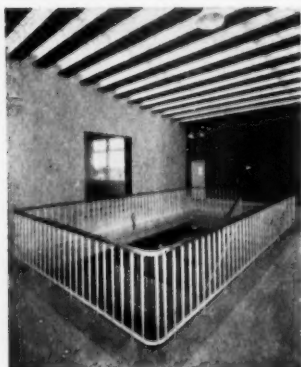


The curved dining room, approached through swing glazed doors from the main foyer, has a glazed wall overlooking a pond and trees. In the opposite wall is a service counter connecting with the kitchens.





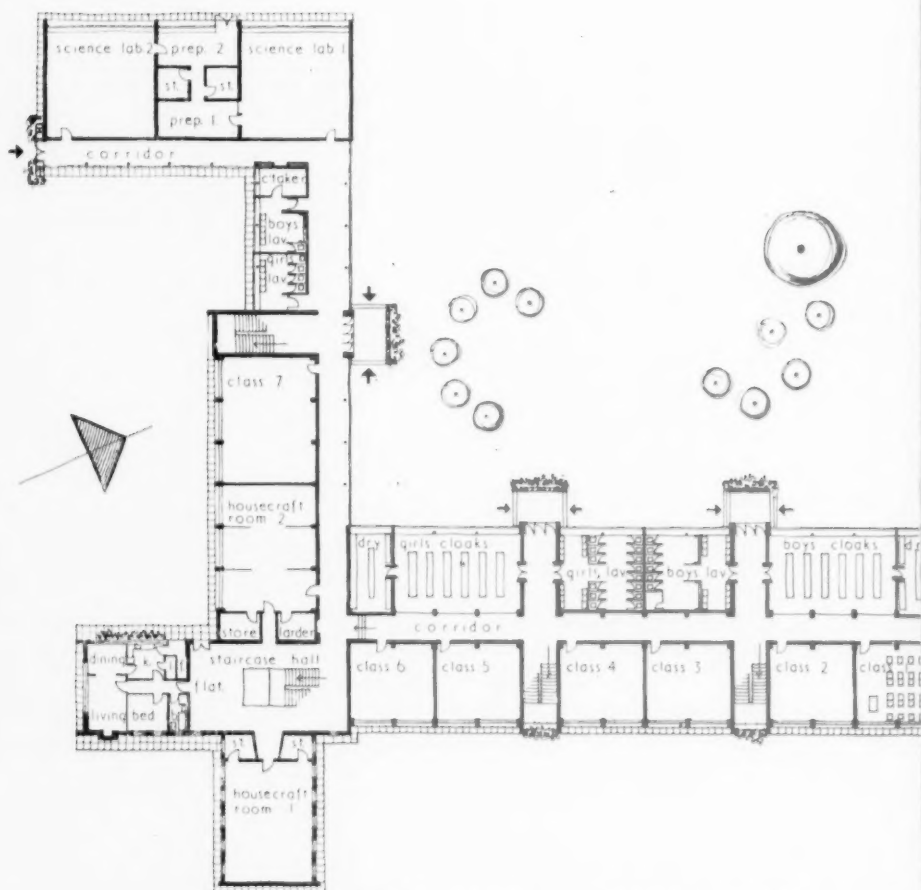
FIRST FLOOR



Secondary stair: Prestressed ceiling beams painted bright red and white; light fittings, yellow.

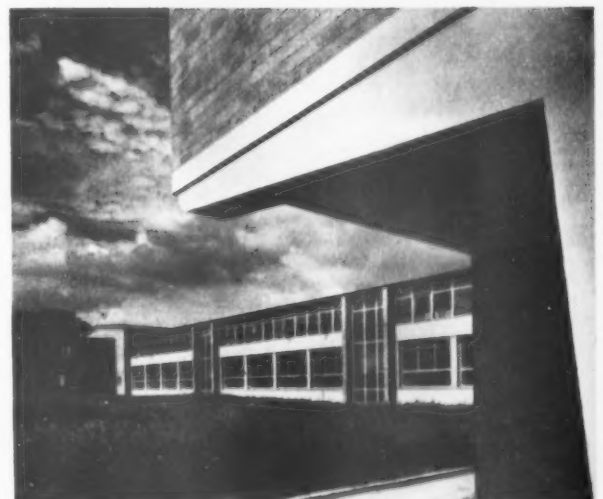
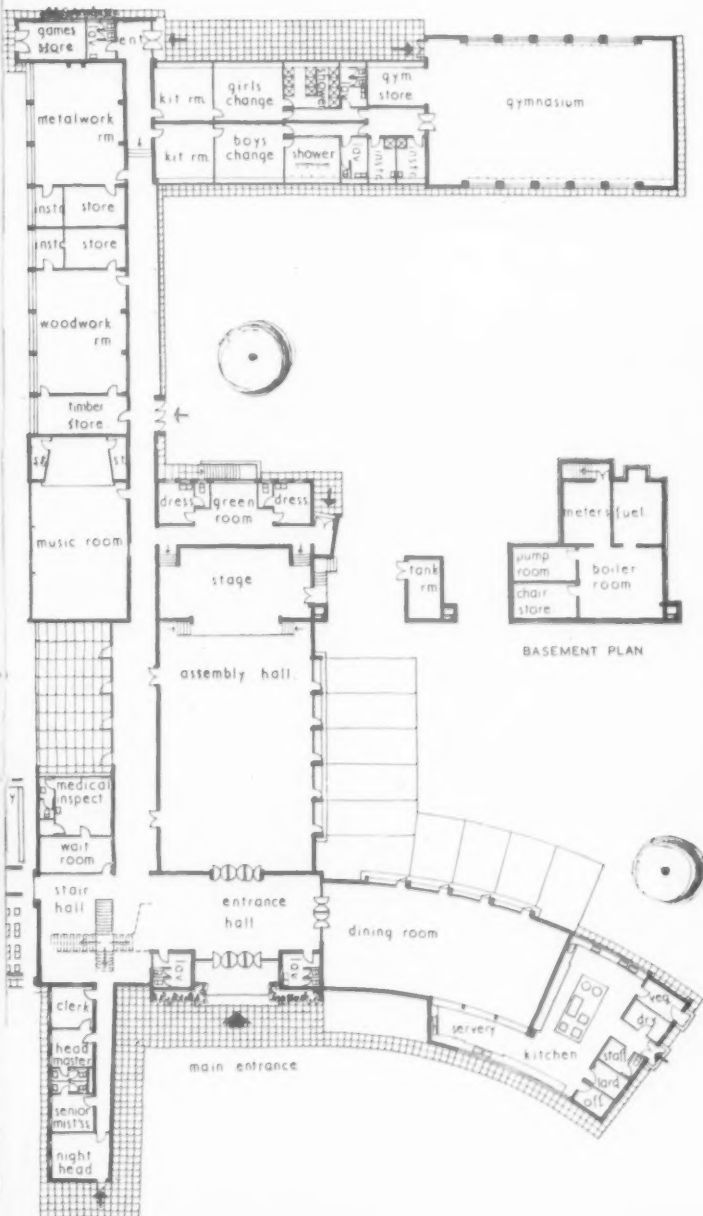
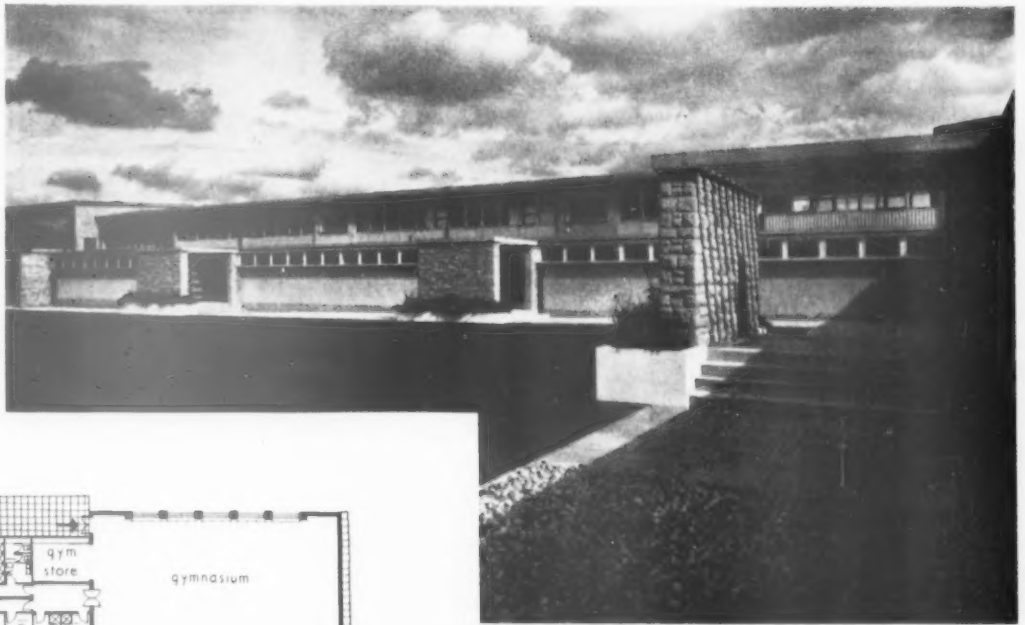


Secondary stair: Ground floor walls dark blue, throwing up dead white of stair handrailing.

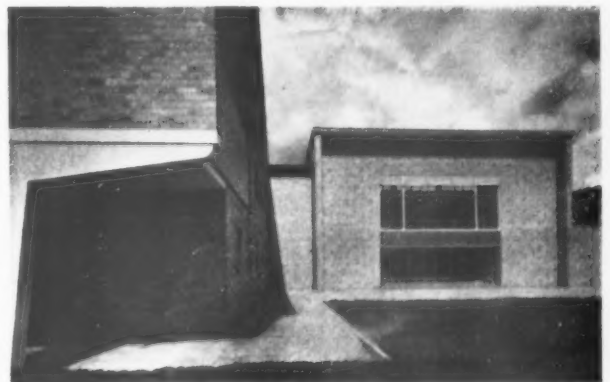


NEWALL GREEN SCHOOL: GROUND FLOOR

The back of the building seen from the tarmac-ed recreation ground. The prefabricated aluminium classroom units at first floor level (see text) have the cladding painted light grey. Timber opening lights are orange, metal windows are pale yellow and rainwater goods are dark blue. Around the recreation area is a cobble strip between the pergola type porches of the entrance doorways.



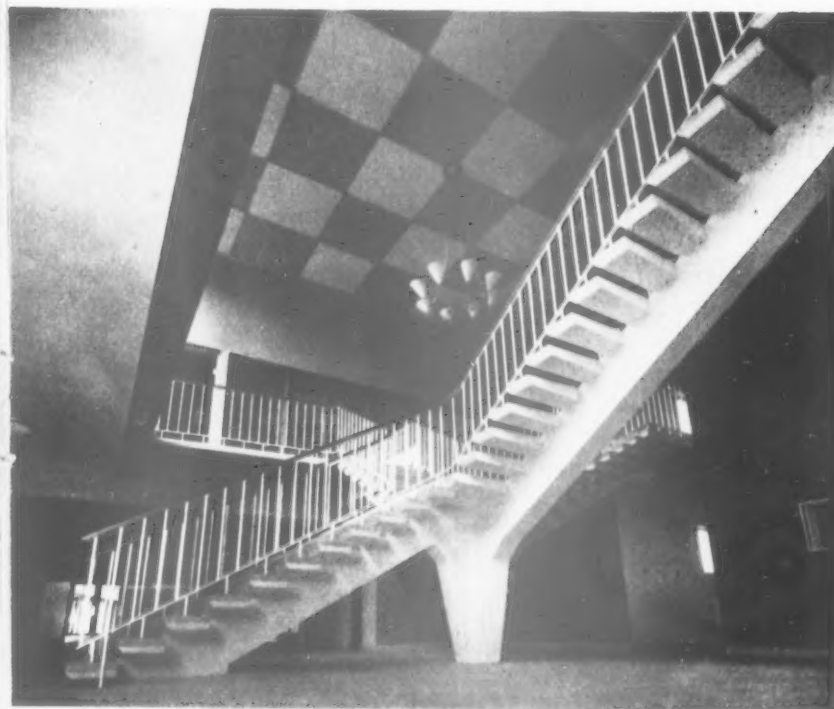
View of front elevation from projecting end of administration block showing prefabricated aluminium classrooms at first floor over brick construction at ground floor.



A view of the main entrance with the administrative wing in the left of the picture. The projecting first floor in the left foreground is supported on a reinforced concrete cantilever unit and forms a covered shelter.



The main stair seen from the top of the flight leading to the library.



The main staircase with its chequered ceiling and dark blue back wall. Artificial lighting is from the eight unit pendant fitting. Natural lighting is from a high-level window.

GENERAL CONTRACTORS : SIMMS, SONS AND COOKE, LTD.

Balustrading : George Wragge, Ltd.

Bookcases : Lewis's, Ltd.

Cloakroom Fittings : James Gibbons and Co., Ltd.

Collapsible Gates : George Wragge, Ltd.

Concrete Roof, Floor Units : Concrete, Ltd.

Cork Linoleum : Robert Kerr and Sons.

Cork Tiling : Jaconello (Manchester), Ltd.

Duct Covers : George Wragge, Ltd.

Dome Lights : T. and W. Ide, Ltd.

Electrical Installation : Electrical Equipment Co. (Leicester), Ltd. C. R. Whately (Caretaker's house).

Flush Doors : Hills of Clitheroe.

Heating and Hot Water Installation : Brightside Foundry and Engineering Co., Ltd.

Hose Reels : Fire Equipment, Ltd.

Ironmongery : James Gibbons and Co., Ltd.

Kitchen Canopy : George Wragge, Ltd.

Magnesite Floors : A. Quilgotti and Co., Ltd.

Metal Roof Deck : D. Anderson and Son, Ltd.

Metal Windows and Door Frames : George Wragge, Ltd.

Prefabrication 1st Floor : Bristol Aeroplane Co., Ltd.

Quarry Tiling : Hulme and Potts, Ltd.

Roller Shutters : G. Brady and Co., Ltd.

Sanitary Fittings : Morrison Ingram and Co., Ltd.

Stage Equipment : Watts and Corry, Ltd.

Structural Steel : Redpath Brown and Co., Ltd.

Tanking : Ragusa Asphalte Paving Co., Ltd.

Tarmacadam : Tarpaving and Tarmacadam, Ltd.

Timber Handrail : Robert Carlyle and Co., Ltd.

Terrazzo Tiling : Conways (Tiles and Terrazzo), Ltd.

Venetian Blinds : J. Avery and Co. (Est. 1834), Ltd.

Wrought Iron Railings : George Wragge, Ltd.

Wood Block Floor : J. Gerrard and Sons, Ltd.

Leonard C. Howitt, City Architect, Manchester

RECONSTRUCTION IN WEST GERMANY — II

by ROLF ROSNER, A.R.I.B.A., A.M.T.P.I.

Town and Regional Planning

WHILST the rebuilding of central urban areas has progressed at a hectic pace there remains in most large and medium towns a wide zone around the centre where reconstruction stagnates, apart perhaps from such streets and districts which before the war consisted of well-designed development for the middle classes. Here the owners will rebuild with the aid of special tax allowances and contributions from prosperous future tenants. The reconstructed properties often accommodate more persons than previously. With little increase in total volume there might be five storeys instead of four, or three flats per floor instead of two. Other districts of this inner zone, more dilapidated and antiquated before damage or destruction, are not attractive to private investors, but speculation and inadequate legislation obstruct development by public authorities. Many families still live there in frightful hovels with little hope of immediate betterment. In the outskirts, however, new housing development is most intensive. Here not only many of the subsidized estates are being erected, but also much sporadic and unplanned building is being carried out by desperate people in search of a home. As a result, new roads and utility services have to be constructed and means of transport extended. In spite of a reduction in population, the number of persons using trams in Hanover rose from 81,199,243 in 1939 to 172,849,362 in 1950. Furthermore, the new estates require numerous buildings for communal uses, schools, community centres, fire and police stations, etc. The strain on municipal funds is therefore severe. Hanover, for example, has lost nearly 50 per cent of its income from property taxation, etc., but financial obligations have increased. This serious problem can only be solved by a general reassessment of land values, the redivision of existing plots and a strengthened legal code. The Land Acquisition Act which was passed a short while ago seems far too cumbersome in this respect.

I saw few attempts to simplify road nets or to build new ring roads, arterials or by-passes. If anything, existing roads were widened. The density of many towns was controlled by the curious method of restricting heights of buildings. Only in Hamburg did I find a serious appreciation of current planning practice; methods are almost identical to our own. The authorities make allowance for proper neighbourhood and traffic planning, and the provision of green belts and satellite towns. I should also mention a positive achievement, the *Siedlungsverband Ruhrkohlenbezirk* created in 1920 as a joint regional planning authority, with powers not only to construct roads and other means of transport, but also to promote housing on an extensive scale. Its development plan of 1933 is periodically revised. Generally, Germany is far behind this country in planning theory and practice. One can hardly believe that there does not even exist a Ministry to attend exclusively to such vital problems.

Housing

In 1939 39.3 million inhabitants lived in the territory which is now the German Federal Republic. In 1953 this figure had increased to 48.7 millions through the influx of refugees from the East, but the number of dwellings was 10.4 million as compared with 10.5 in 1939.

About 2½ million dwellings, more than one-fifth of the total number of dwellings existing before the war, were destroyed or severely damaged. Approximately one-quarter of the totally destroyed dwellings has been reconstructed and many of the lesser damaged dwellings have been repaired, in some cases only temporarily. According to the census of September 13, 1950, about two million persons lived in emergency dwellings (bunkers, cellars, huts, etc.). Of 15½ million families only 40 per cent lived in their own

houses, 40 per cent shared one dwelling with another family, and in the case of 20 per cent two or more families lived in one dwelling. Little surprise, therefore, that in 1950 more than 12 million persons, i.e., about 25 per cent of the Western German population, were sub-tenants.

At the beginning of 1953 the number of dwellings required amounted to more than four million dwellings, of which about three million were urgently needed for families. In addition about two million dwellings will be required in the next 15 years for new households. Thus Western Germany will take at least 15 years to meet the most urgent housing needs.

The official figures for housing in recent years were as follows:

1949	about	215,000
1950	"	360,000
1951	"	430,000
1952	"	440,000

Seventy-two per cent of the dwellings completed in 1952 were new buildings, 20 per cent reconstructions, and eight per cent alterations and extensions.

A remarkable output for a country so heavily hit by war. It is, however, regrettable that official circles are using these figures to make quite unfair comparisons both for internal and external consumption. Thus in statistics German output almost leads all European countries with 91 houses per 10,000 of the population, Britain being placed half way down the ladder with a mere 47 houses per 10,000. Quantities, however impressive, are likely to be modified by factors of quality. Of the 300,000 dwellings completed in 1952 with the aid of public funds, 74 per cent were 3-4-room dwellings (living rooms, bedrooms and kitchens included) with average areas of between 40 to 50 square metres or 480 to 580 square feet if an extra of about 40 square feet has been allowed for storage and laundering facilities. This may be compared with 4-5-room houses (exclusive of kitchen) which with floor areas from 750 to over 1,000 square feet form the bulk of the British post-war output, and be it noted that the large majority of new German dwellings are flats, although their inhabitants are just as keen to have a garden of their own as people in this country.

I was also struck by the number of single-person dwellings recently built. As the result of the war there exists a considerable surplus of women who are obliged to earn a living and naturally wish to spend their spare time in something better than "digs." Blocks of flats designed for their needs are amusingly referred to as "Angels' Castles." Sixteen per cent of all dwellings completed in 1952 had one to two rooms (inclusive kitchen). They are unlikely to be occupied by single women only; the high percentage suggests that numerous married couples, possibly with even a child, will live in them. The average area of a one-room flat with kitchenette and bathroom is 260 square feet.

Now and then an imaginative housing authority incorporates flats in its schemes, which can be amalgamated at a later date. To this should be added the duplex houses of the outer suburban cottage estates which now accommodate the owner on the ground floor and a refugee family upstairs, at least for the time being. Both Germans from the East zone and the various Slavic areas from which they were expelled have their own distinct housing allocations, the extent of which has occasionally caused a grumble among the bombed-out of Western Germany.

The first Housing Act of April, 1950, defines three categories of housing:—

- "Social housing" encouraged by State subsidies.
- Housing with the aid of tax remissions.
- Housing with the aid of private funds.

The institutions providing funds are



Hanover. The Kreuzkirche with adjoining terrace houses for professional people.



HANOVER: Central area reconstruction.

- (a) The private capital market (savings banks, real estate credit institutions, insurance companies, real estate savings banks) covering 30 per cent of the total amount of investments.
- (b) Public funds (Federal Government, Lander, local authorities) covering about 50 to 60 per cent.
- (c) Builders' investments (self-financing, joint-financing, employer loans, employer contributions, etc.) covering about 10 to 20 per cent.

Housing investments were:

1950	..	3,8 milliard DM	(£327,000,000)
1951	..	4,7 " "	(£401,000,000)
1952	..	5,6 " "	(£478,000,000)

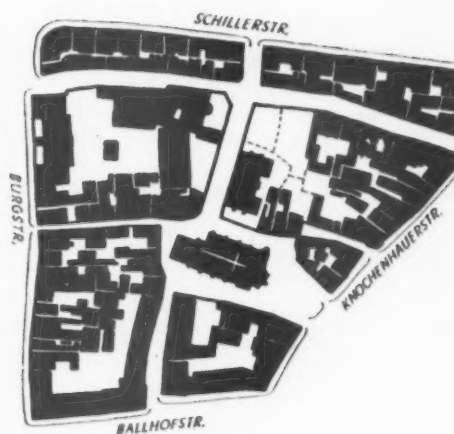
From mid-1950 to the beginning of 1952 the building costs rose considerably. Since then they have remained steady.

Housing for Mineworkers

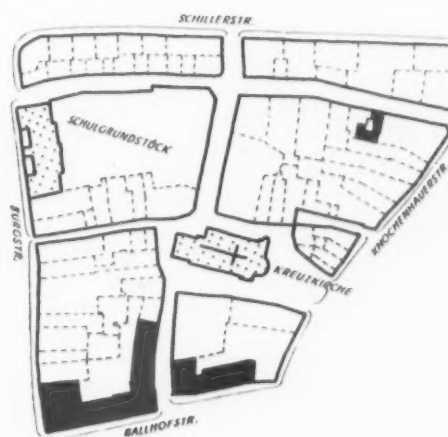
The importance of miners is fully realized in Germany and much has been done to rehouse them. State, Lands, Trade Unions, a special housing trust, *Treuhandstelle für Bergmannswohnungen*, and various housing associations combine in solving this problem.

In the Ruhr, 15 per cent of their dwelling were destroyed

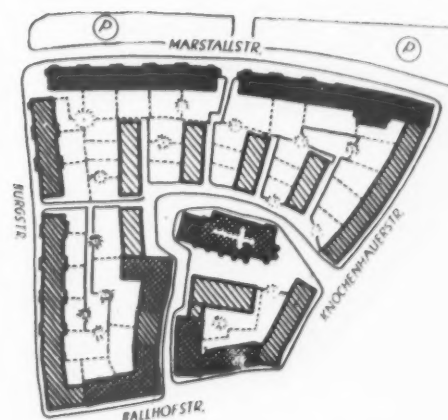
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Hanover. Central area around Kreuzkirche in 1939.



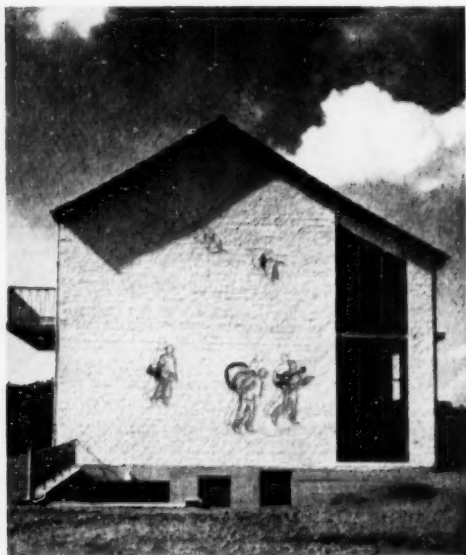
The same area as above after destruction.



New estate, with old boundaries abandoned. Reconstruction through voluntary agreement amongst land-owners. The well-planned re-development of inner urban areas is unlikely to be achieved on this basis. There have been too few successful schemes following similar lines. Negotiations may take years.

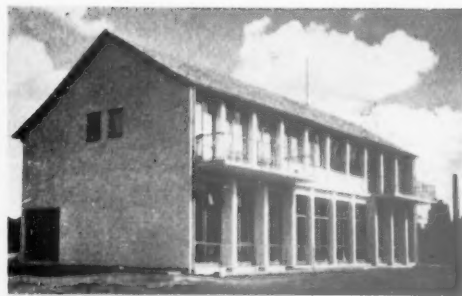


LEVERKUSEN: Shop and three-storey blocks of flats.



Below, Left: Flats overlooking the Rhine. Strong colours were used here, but peeled because of atmospheric pollution.

Right: Estate Rheuterstr.

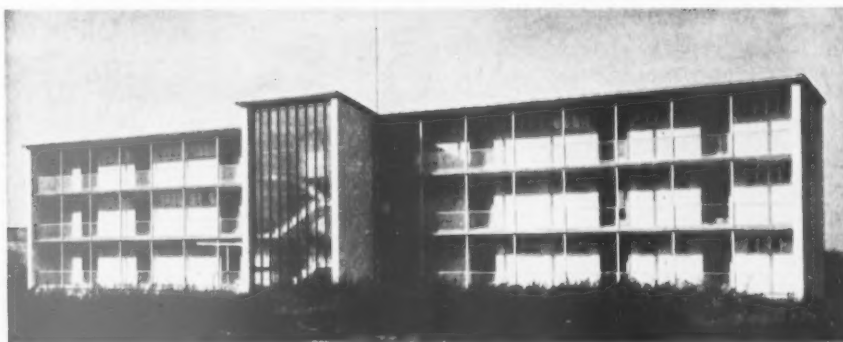


Club house for young workers. Wall decoration in sheet metal.

Primary school, Manfort. The centre portions of the class room windows are tinted in order to reduce the intensity of sunlight. Architect throughout: Seitz.



LEVERKUSEN



Balcony access flats



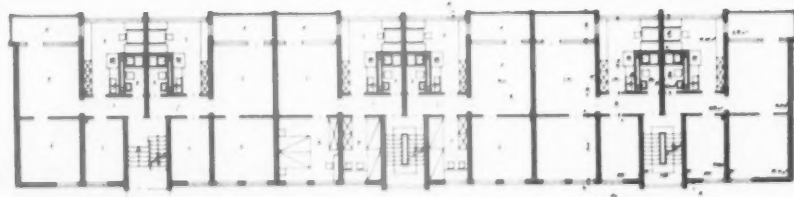
School "Waldsiedlung"

School "Waldsiedlung."

Under windows, flower boxes and radiators. In each classroom there is a different wire motif made of brass, copper or aluminium.



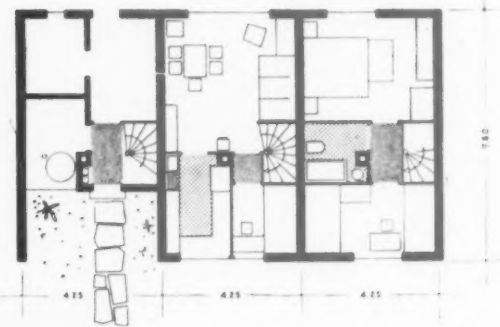
Estate Dhünnsr



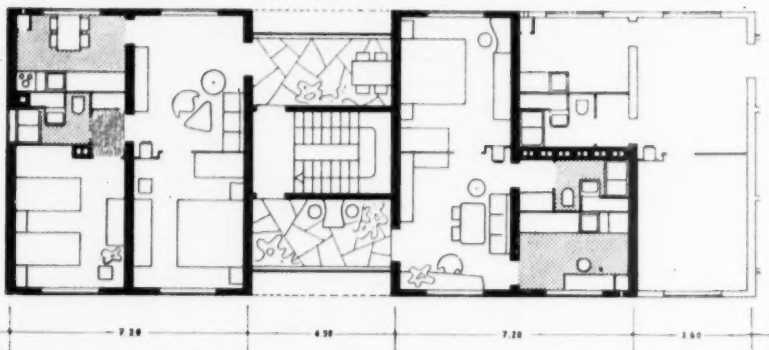
Plan of four-room flats (including dining kitchen). Note internal bathroom.

and 59 per cent damaged to varying extent. By 1948 much repair work had been completed and a sizeable number of new homes, increasing from 5,000 in 1949 to 19,000 in 1952, were started. During 1951-2 £4.9 millions of American aid were given for the partial financing of 10,000 dwellings and during 1952-3 £8.5 millions for the financing (exclusive of land, etc.) of 7,000 dwelling units, 90 per cent of which are to be owner-occupied. This provision, it is hoped, will induce miners to become more attached to their pits. Their drift into other occupations seems to be an international problem.

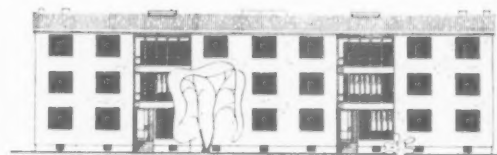
The most interesting measure, however, is a state levy of 3s 4d per ton of hard coal and coke and 1s 8d per ton of soft coal, which increases construction funds by £17.6 millions each year. Incidentally, foundation reinforcements for the prevention of possible subsidence are the responsibility of the collieries and disagreements between their owners and the housing agencies may sometimes lead to court action.



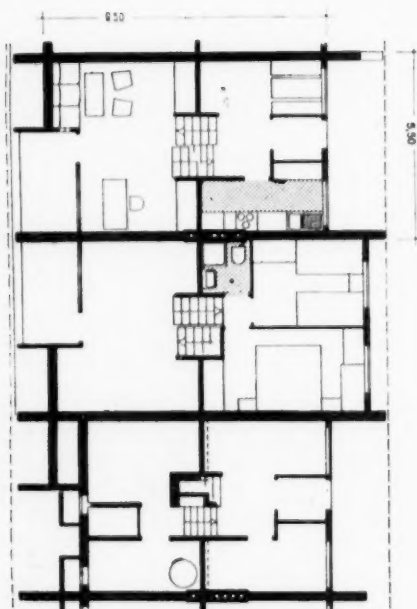
Three-storey terrace house in Bremen. A. Hebebrand-Schlemp-Marschall.*



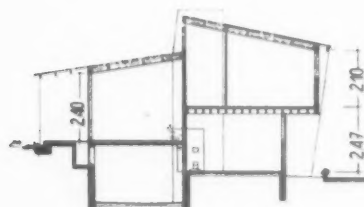
Plan of flats at Krefeld. A. Michel, Klinkenberger & Lesser.*



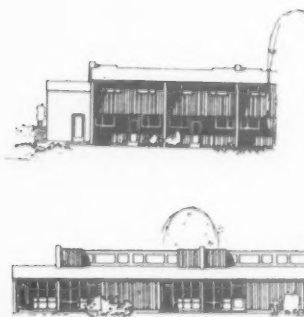
Elevation of flats at Krefeld.*



Plan of 1½-storey terrace house in Stuttgart. A. Hausechild, Karrer and Breitschadel.*



Section showing half-levels of Stuttgart house.*



Front and rear elevation of Stuttgart house.*

ALL THE ABOVE ILLUSTRATIONS REFER TO THE E.C.A. COMPETITION



BRUNSWICK: E.C.A. six-storey maisonnettes. A. Bartels and Schweitzer.



Public staircase in the same block.



Three-person maisonnette.*



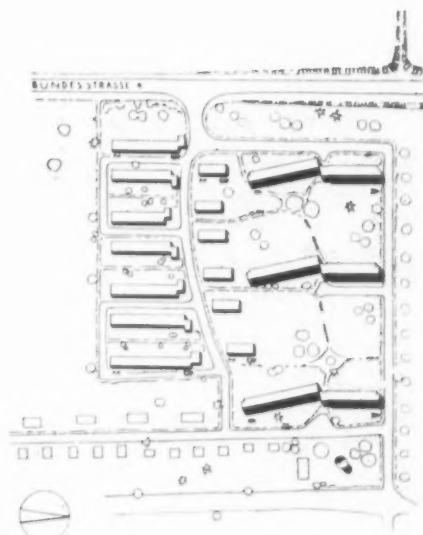
Four-person maisonnette.*

The E.C.A. Competition

"The British don't want American money," I was told in Essen. "The French spend it on food and we Germans on housing." The German building effort has most certainly been accelerated through American help.

By spring, 1952, Marshall Aid for housing amounted to £56 millions, with one-sixth of that sum set aside for miners' dwellings. Furthermore, the enormous funds for the revival of the national economy had a similar effect when used as grants to the bombed-out and refugees. The former covered first mortgages urgently required by the various housing agencies, the latter capital contributions from prospective owners and tenants. In 1951 £4 millions was allocated for one of the most interesting post-war housing competitions. Architects and builders were invited to submit designs for estates containing 200 and 300 dwellings of various types. In 15 major towns of Western Germany the municipalities concerned donated the required land and undertook to construct roads and services. Costs were not to exceed £154,000 for the smaller estates and £231,000 for the larger ones. Whilst numerous building regulations were relaxed in order to stimulate originality of design, entirely unconventional methods of construction were discouraged. Seven hundred and twenty-five schemes were assessed by 13 German experts and six Americans connected with E.C.A. (Economic Co-operation Administration), which regarded the competition as one of its many sound investments. In some towns up to 40 specialists tested the submitted layouts under five headings: (1) Site planning; (2) Planning of dwellings (a large number of 4-person units at 550 sq ft each had to be included); (3) Building costs and maintenance charges after completion; (4) Methods of construction and services; (5) Design.

Foremost among quantitative considerations were (a) the net dwelling area (NDA), i.e., the area of a dwelling enclosed



Site plan of maisonnettes and terrace-houses.*

by party and external walls, and (b) the gross dwelling area (GDA), i.e., NDA plus enclosing walls, plus (in the case of flats and maisonnettes) its share of common access areas, taken at 20-25 per cent of NDA. A single person's share of these areas was defined as NDA/P and GDA/P. One-

family houses were analysed for (a) grouping (detached, semi-detached or terraced); (b) number of storeys; (c) number of persons; (d) GDA/P. One of the most economical two-storey houses for five persons was 26ft 3in deep with a frontage of 16ft 6in (GDA—870 sq ft. GDA/P—174 sq ft). The most economical frontage per person per storey proved to be 5ft, but the average was 6ft 8in.

Flats were analysed for (a) number of dwellings per gross storey area (D/GSA), accessible by one staircase. This facilitated the comparison of staircase or balcony access blocks with varying types and numbers of flats; (b) number of persons per storey (P/GSA); and (c) area per person per storey (GSA/P). As practical example, the GDA/P for two-person flats with staircase access was up to 40 per cent above those with balcony access.

The economical GDA/P for two-person households was established as 262 sq ft; for three-person households 220 sq ft; for four-person households 166 sq ft; for five-person households 152-160 sq ft and for six-person households 131 sq ft (the latter two were mainly staircase access types with two flats per landing).

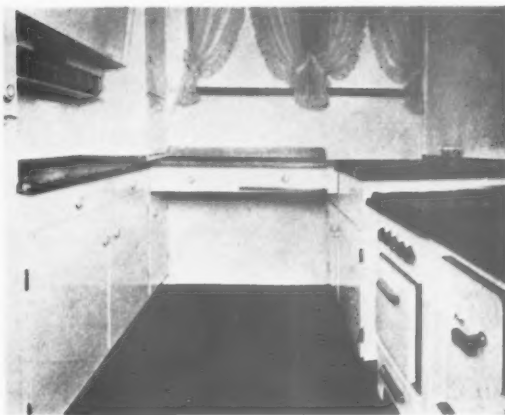
Accommodation for two persons was thus twice as expensive as that for six persons. It was recommended, therefore, to mix small flats with large ones in order to achieve a GDA/P of about 170 sq ft, i.e., the standard for a four-person dwelling. Mere quantitative measurement had to be qualified by proportions and aspect of rooms, heat, light and sound, services and special amenities like balconies, loggias, drying and storage facilities, proximity to traffic and general environment.

Thus kitchens and the varying combinations of baths, showers, wash basins, w.c.s and their location within the dwelling (whether naturally ventilated and lit, when adjoining external walls, or artificially when planned as internal cells) required no fewer than 18 statistical groupings. Kitchens ranged from units with dining facilities for a minimum of four persons, to mere recesses separated from living-bed-rooms by curtains or folding partitions; bathrooms from units combining bath and washbasin with a separate w.c., to shower baths combined with washbasin and w.c. Average areas for cooking recesses were 32 sq ft for working kitchens, 44-66 sq ft and 82-100 sq ft for dining kitchens. Apart from natural ventilation, most kitchens were fitted with vent ducts which, by means of adjustable louvres, accelerate the change of air. The ducts, with an average cross-section of 30 sq in, have their intake in the external wall of the semi-basement and their outlet at roof level. Methods for cooking and warm water supply vary widely in Germany. Many German kitchens still have mere cast-iron ranges. (In the Ruhr I was told that this type of cooker, which forms part of a dwelling's equipment, is occasionally left out because the tenants insist on the use of a ruinous, but no doubt inexpensive, sulphuric coal. Generally, ranges combined with gas or electric cooking units are regarded as the economic medium. Water heaters vary from huge coal-fed coppers towering over the bath, to well-designed electric units which must be expensive to run. Short baths ranging from 4ft 6in to 3ft 11in, the latter being stepped, are often used to reduce bathroom areas.

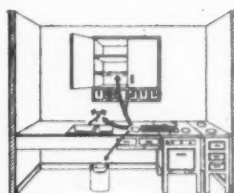
For space heating, slow combustion stoves are predominant.

The E.C.A. Estates which were completed last year are still being investigated. According to the assessors, the dwellings were built at a cost 10 per cent below that of comparable units erected at the same time. In 1952, an E.C.A. dwelling with an area of about 525 sq ft cost about £970 or £1 17s per sq ft. In conclusion, the reader may wish to compare the British and German area standards (in sq ft):

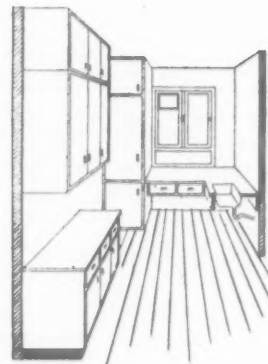
Type	E.C.A. flats (average)	L.C.C. Balcony access flats
1—2 person flat	260—390	400—420
2- " "	522	480—510
4- " "	600	620—650
5- " "	660	700—750
6- " "		870—875



The 6ft 8in x 6ft 8in Krefft kitchen



Rationalized planning of German working kitchen



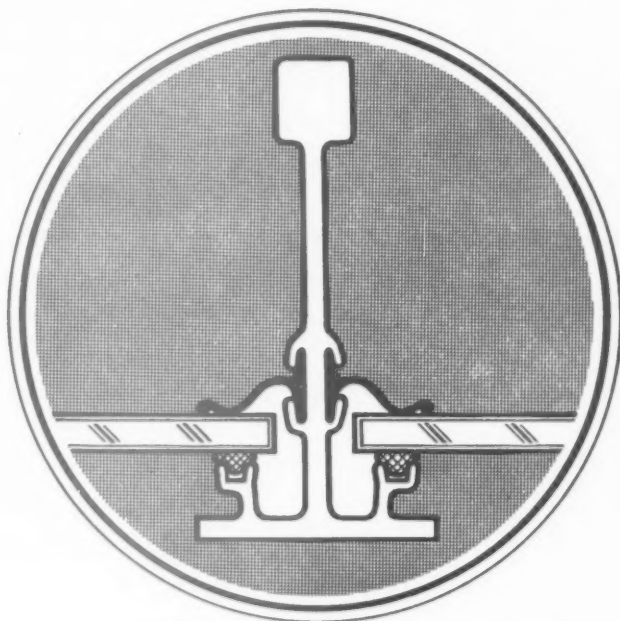
German architects have distinct ideas about kitchen planning. Based on the fact that most women are right-handed, units are arranged from right to left: cooker, working top, sink, draining board, top and/or dresser. The installations of the kitchen and those in the adjoining bathroom are to form one unit which is not to be handed when repeated on the same floor.

Housing Finance

The Housing Act of 1950 deals mainly with the needs of persons who have had to leave their homes or whose dwellings were destroyed. Public subsidies assist them in "social housing schemes," which form about three-quarters of the total housing output. Secondly, the Act assists home-building through reductions in property and income tax paid by builder and tenant. Rentals should cover costs but should not exceed 2.8d per sq ft per month. These dwellings, the

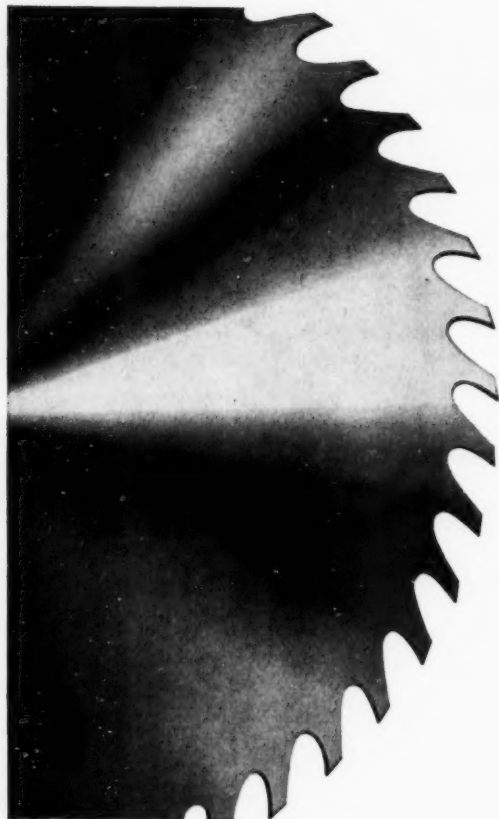
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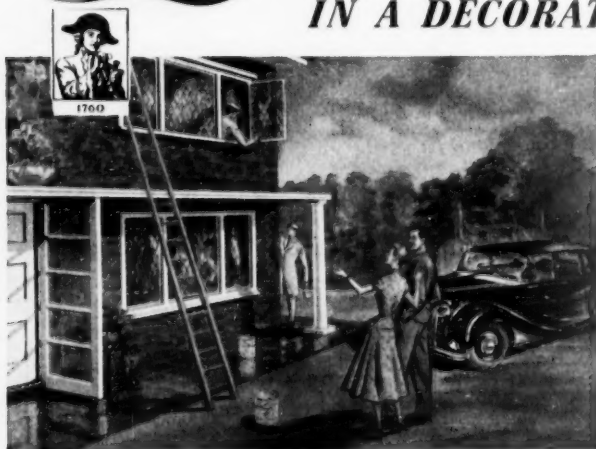
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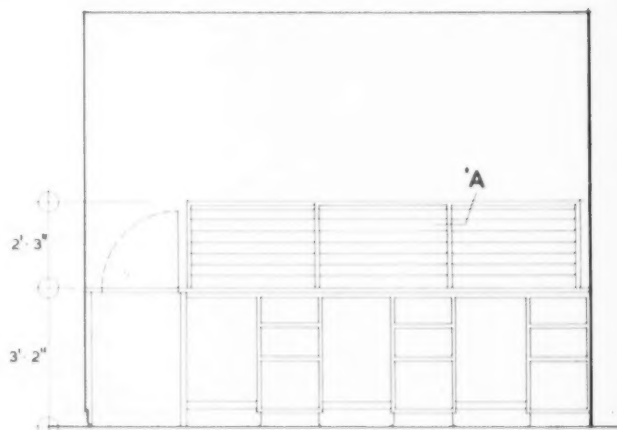
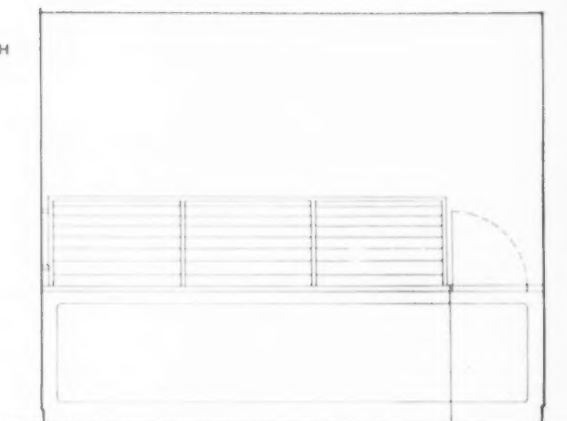
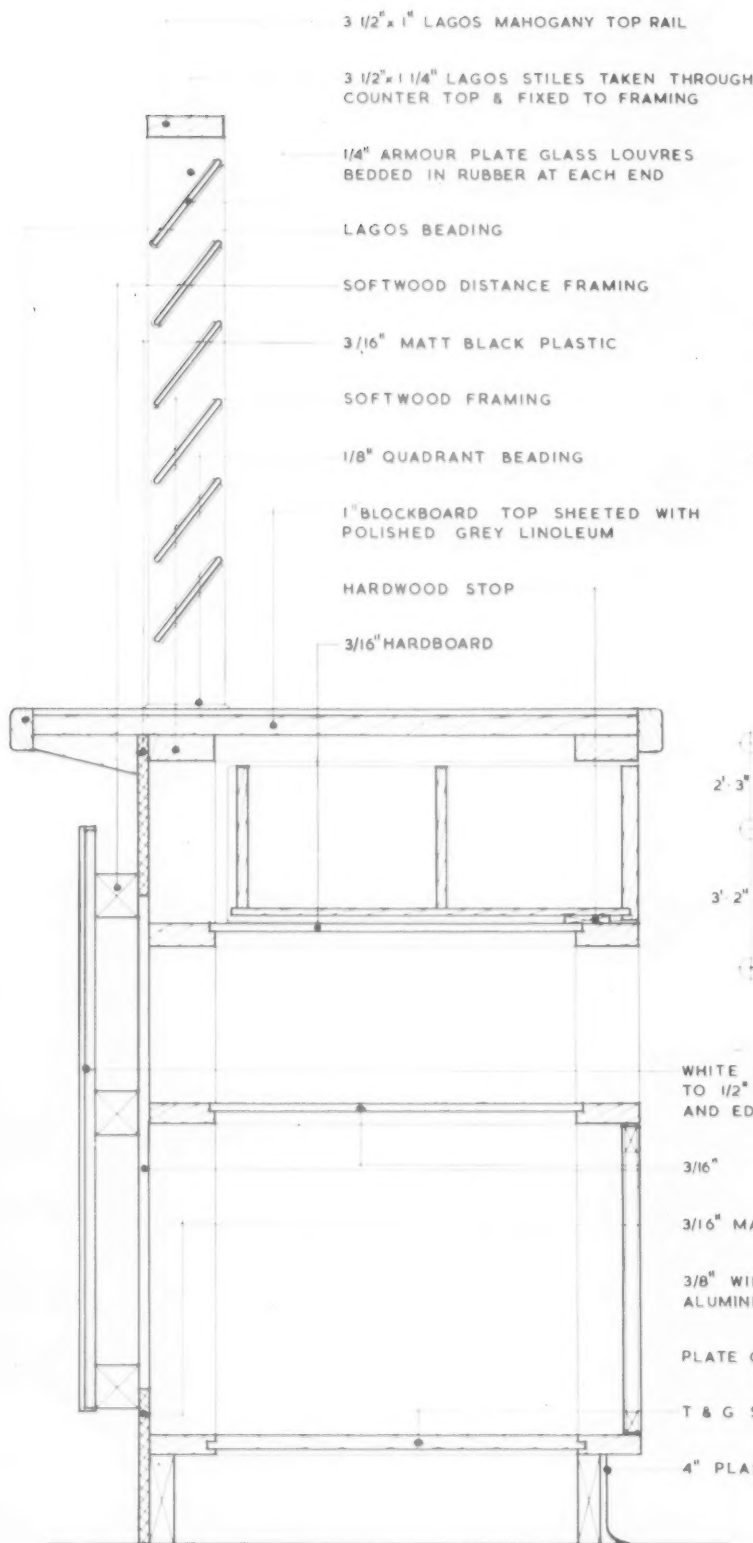
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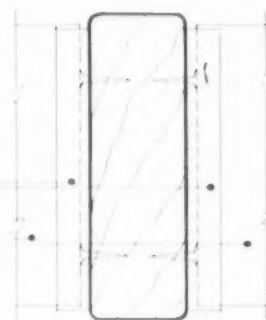
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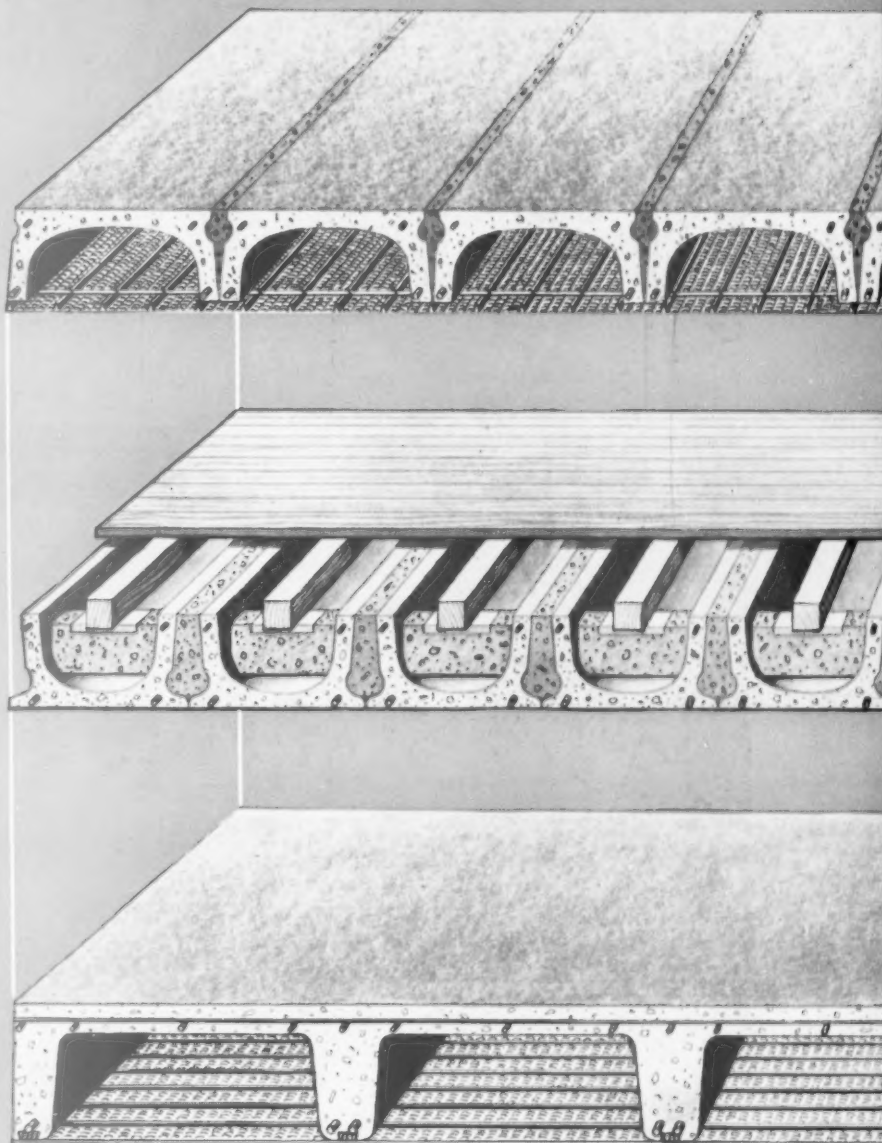
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floor space of which should generally be no more than 950 sq ft, may be disposed of freely by the builder. Thirdly, the Act deals with entirely unassisted dwellings erected by private capital which are not subject to any control, allocation or limitations with respect to size and rent.

"Social Housing" is divided into three rental categories. Class 2 for rural areas at 1.65d per sq ft; Class 1 for semi-urban and urban areas at 1.8d per sq ft and a special class for urban areas at 2d per sq ft per month (i.e., 1.10 DM per m² per month). These figures cover only a fraction of the economic rent. Savings banks, public credit banks, insurance companies, etc., usually provide the first mortgages covering 20 per cent to 30 per cent of total, repayable at 1 per cent p.a. with interest ranging from 5½-6 per cent. Long-term State and Land loans amount to about 60 per cent of total cost at a lower rate of interest. The balance of 10 to 20 per cent has to be found by the tenant. Certain classes, such as disabled ex-servicemen, may obtain loans of up to £90. If the building project is a co-operative undertaking, members have to contribute £70-£90. Industrial undertakings can grant their employees loans of £90 to £180, which may be deducted for tax purposes. This also applies to co-operative share investments. Groups with incomes of between £510 and £770, i.e., earnings somewhat beyond those of the average worker, are eligible for subsidized housing with certain reservations; they may invest 20 per cent of one annual income. This can take the form of a contribution or a loan, repayable over 20 years without interest. On Hamburg's Grindelberg estate there are 150 such tenants among a total of 1,500. Generally, dwellings built with public funds should have floor space ranging from 350 to 710 sq ft. Under the 1950 Act, an average urban family dwelling of 450 to 550 sq ft is let at 75s to 92s per month, i.e., 17s to 20s a week. As a result of the Korean war, building costs have risen by 30 per cent since 1950, and I several times heard the emphatic view that economic rents should be charged with remissions subject to means tests. Many property owners are dissatisfied too, because the rents of pre-war houses are restricted to their 1938 level. An Amendment Act has now been passed which permits rent increases so the average of 17s to 20s will be now nearer 23s to 26s a week.

Of interest are special cases of subsidized development such as the Grindelberg scheme of multi-storey blocks. Here a variable tariff of between 13.6 per cent to 23 per cent is added to the basic rent of 2d/sq ft/month. This tariff, which increases as the size of the dwelling decreases, covers radio-diffusion and lifts, etc. A further 63 per cent on the basic 2d is made for district heating and warm water supply. Thus the larger flats carry a monthly rent of 3.6d/sq ft, the smaller ones of 3.7d/sq ft and dwellings completed after the passing of the new Act will have an additional increase of 30 per cent on the basic 2d, i.e., 0.6d. At 4.2d/sq ft/month rents for average-sized family dwellings of 550 sq ft will be as much as 43s per week. How do the more usual rents of about 23s to 26s relate to working-class earnings? In Hamburg the hourly rate of a bricklayer is 3s 4d and that of a labourer 3s. Wages for a 47-hour week amounted, therefore, to £7 1s and £7 15s which, with an average bonus of 30 per cent would rise to £9 3s and £10 1s. Insurance and tax deductions of about 30s a week leave as net incomes £7 13s and £8 11s. In the case of workers with family, child-allowances are being paid which are substantially higher than ours and payable for the first offspring, too. The average worker therefore pays between 1/5th to 1/9th of his net income in rent for a new dwelling which is, however, substantially smaller than its British equivalent. What is the relation of rents to general living conditions? Food is distinctly more expensive than in Britain and the high incidence of unemployment cannot be ignored either. About one million wage-earners are regularly affected. Curiously, the building industry's share of this calamity seems to be out of all proportion. In March, 1952, 273,500 operatives were unemployed, in May, 1952, 154,400, i.e., 24 per cent to 13 per cent of the total labour force. In May, 1953, the figure was 123,100.

The Architectural Profession

The visitor from the United Kingdom is baffled by the division of interests and aims among German architects.

Professional education advances in two streams, one academic and one more practical. After passing high school matriculation at the age of 18, a boy or girl may enter a technical high school (university standard) where on completion of a regular 4-5 years' course, which includes some practical experience, he or she qualifies as Diploma Engineer and subsequently as Doctor of Engineering if a special thesis is approved. Alternatively, the student leaves a *Mittelschule* (an institution somewhere below high school standard) at an earlier age and enters a building trade school or technical college in order to serve a most thorough apprenticeship. The successful completion of his course qualifies him as building technician and architect. Both he and his academically trained counterpart will enter their own professional associations, which in no instance have a status comparable to that of the R.I.B.A. These associations are subdivided into (a) geographical and specialist institutions and (b) institutions indicating social relationship, i.e., whether he is employed by a public authority or a private concern, or whether he is independent. The lack of co-ordinating which bedevils the whole profession, is only gradually being overcome by the recently founded Association of German Architects and Engineers (DAI). Most authoritative among all organizations remains the BDA which opens its ranks only to private architects of proved merit and experience. At present there seems to be no overcrowding of the profession, for the scope of building is substantial. The ultimate aim of the qualified architect is the establishment of a practice of his own, but at first he may accept an employed position. If he works for Government or local authority his conditions will be quite reasonable; three months' notice on either side, four to five weeks' holiday a year, long periods of full sick pay and, possibly, individual assistance in matters concerned with housing or health. But his pay will be somewhat below comparative figures in Britain. This kind of employment, as that with private firms, is little different from ours but office hours are 48 hours a week. Usually architects with a more practical background will tend to concentrate on more practical matters, e.g., the supervision of the contract stage of a scheme. Salaries for technical employees, graded according to qualification and experience, are laid down by national agreement and fees for private architects by statutory order. The fees are grouped in seven different classes, each defining the type of work to be carried out. Percentages of fees are similar to ours, but everything is divided into innumerable categories; after exacting perusal one yearns for the "rule of thumb."

The independent professional man is being strongly encouraged. The bulk of the work for local authorities and the various housing associations is carried out by private architects. Many towns commission consultants to carry out their planning surveys. A veritable spate of competitions accentuates this trend.

Acknowledgments

I would like to thank the following for their kind assistance and hospitality. Frau Paula Schäfer, Secretary of "Deutscher Verband für Wohnungswesen," Frankfurt a.M.

Oberregierungsrat Dr. Roth, Oberregierungsbaudirektor Wessler and Dipl. Ing. Jesumann, Bonn; Dr. C. Schweyer, Chairman of GAG, Cologne; The Townplanner of Leverkusen, P. Granz; the Townplanner of Düsseldorf, Professor Tamms; Stadtbaurat Dr. Hollatz, Herr Sturm Kegel, the Director of "Siedlungsverband Ruhrkohlenbezirk" and Dr. P. Christoffel, the Director, "Treuhändstelle für Bergmannswohnungen," Essen; Stadtbaurat Dr. H. Knipping, Hagen; Stadtbaurat Dr. E. Hopmann, Gevelsberg; Stadtbaurat Prof. Hillebrecht and Baurat Stossberg, Hanover; Oberbaudirektor Prof. W. Hebebrand, 1ster Baudirektor Seitz, Baurat Sommer, Dipl. Volkswirt H. Plett, the Director, "Neue Heimat" and Dipl. Hdl. H. Zwanck, the Director, "Saga," Hamburg. And also any others whose names may have been inadvertently omitted above.

All illustrations marked thus * are from "Neuer Wohnbau," Otto Maier Verlag, Ravensburg.

(The technical aspects of his tour will be described by Mr. Rosner in future articles.)

Building Research, 1952

THE Report of the Building Research Board for the year 1952 (H.M.S.O. 3s 6d), which is the body controlling the Building Research Station, makes very interesting reading as from it one is able to know what research subjects have been and are now receiving attention. Concise paragraphs on a very large number of subjects are given and in a number of instances these are accompanied by illustrations.

It seems most unfortunate that there had to be a cut in the expenditure permitted to the Station as the relatively small total cost is money well spent as it is expenditure which should ultimately reduce the enormous total annual expenditure on buildings and their maintenance. It is to be hoped that the grant may very quickly not only be restored but increased as there is still very much useful work to be done.

Among the points from the Directors' Report which are stressed in the Board's Report are several which I find particularly interesting. First, there seems at last to be a good prospect of a method of eliminating effectively the spread of dry-rot to new timber from infected brick or stone walls by using a zinc oxychloride paint. The second point which attracts my attention is the work on schools in association with the Ministry of Education, but I doubt the wisdom of taking the work on paint colours to the point at which the Ministry sponsored a range of colours, to add just a lot more to the ranges the paint industry already produces. I doubt if schools need any colours which have not a general application. Another point is that work is progressing slowly on the performance of dwellings but one hopes when it ends it will have achieved more than that already published on kitchen planning.

A fact which seems to have surprised the Station, although I do not find it so surprising, is that hot water consumption rises as high as 450 to 550 gallons per household per week as against 250 gallons often assumed in the past. I believe these figures are much nearer reality for the average household having the means of providing an adequate supply of hot water.

I notice that the Station has been carrying out the testing of cement by means of tests on concrete specimens. This seems to be a new departure which, if successful, would seem to be very useful, as so much cement is used as concrete. So to test a cement as concrete should give one more useful information than when it is tested as a cement mortar.

The Report includes an illustration of a serious failure of a cast-stone mullion which shows only too well how important is the quality of the facing applied to a concrete core. I see that an investigation of failures of asbestos-

cement roofing of cowsheds has been in hand. Cowsheds, especially if poorly ventilated, seem to be a frequent cause of failures of roofing. My experience is, however, that even if asbestos-cement fails in 20 years most other materials, such as corrugated iron, fail much sooner.

I have recently heard from abroad of the possibility of using a pitch-fibre composition for rainwater goods but to read in this Report that a rainwater pipe failed in less than nine months makes one doubt the news of successful developments in other countries.

The report of the failure of asphalt in a battery-room due to the use of a limestone filler does not seem surprising. Perhaps another B.S. in the asphalt flooring series for battery rooms might fill a need.

I notice that the Station has been working on putty for metal windows for B.S.I. but it seems a pity that this information has not yet appeared as a B.S. I am sure we all need advice badly in this sphere.

The work on methods of treating concrete to serve as a substitute for steel petrol tanks seems no longer to be important as steel now seems to be in adequate supply.

Among the work on metals described are long-term tests on aluminium and its alloys embedded in cement and cement-lime mortars. The outcome of these long-term tests will be very interesting as is that on aluminium for flashings which seem to indicate that it is desirable to use only super-purity aluminium for this purpose.

One wonders whether the research on productivity and costs contributes very much to lessening the price of building. It might be better to use the same effort to achieving the ability to sack those who do not do a worthwhile day's work, and to paying out labour according to its merits instead of a minimum wage, which in practice is virtually the only wage, and also to relating the bonus target to a proper output for a skilled man.

I am extremely pleased to note that there is to be a study of house maintenance. It is a subject on which very little worthwhile information is available. If it is prepared in a useful manner it should indicate how the right choice of materials can quickly become an economy and that poor workmanship is the cause of very heavy subsequent costs. It would be even more interesting if some private building both of the built-to-sell and the architect-controlled types could be compared with local authority house building; the last might usefully be in two groups also, namely, houses built by direct labour or with carefully selected contractors and by "the lowest tender" method. I still feel that to advertise and take the lowest tender invites trouble as it is quite impossible

to specify quality of workmanship sufficiently well to get what one really wants since different contractors' views as to what constitutes "good" workmanship are so very varied.

The Report mentions the now well-known Norwich scheme where a tower-crane was used. I still believe it very difficult to assess what proportion of the gain in man-hours was due to the crane and what proportion was the result of organization; one wonders if the saving might not be much the same if the same organization efforts had been used but not the crane.

The paragraphs of the Report relating to the Scottish Laboratory indicate that this is now well established and making a useful contribution not only by coping with local problems but as a part of the national work on building research. In time we may learn whether the reputed bad climatic conditions in Scotland are in fact worse than those in equally exposed parts of Cornwall and Wales. I often wonder if it is not an excuse for keeping to traditional practices. I should be very interested if the Scottish Laboratory could give me a reason for the use of 6in butt hinges for hanging internal doors; I doubt that this is a research problem but merely a proof that custom dies hard.

The Station appears to be receiving as many enquiries as before. It is to be noted that the written enquiries from architects and similar consultants are about twice as many as those from the contractors and as those from manufacturers. There is no doubt that the industry now makes good use of the Station although nonetheless one feels from looking constantly at buildings that much more advantage could usefully be taken of its work and publications. There can be no doubt that the nation gets good value for its money.

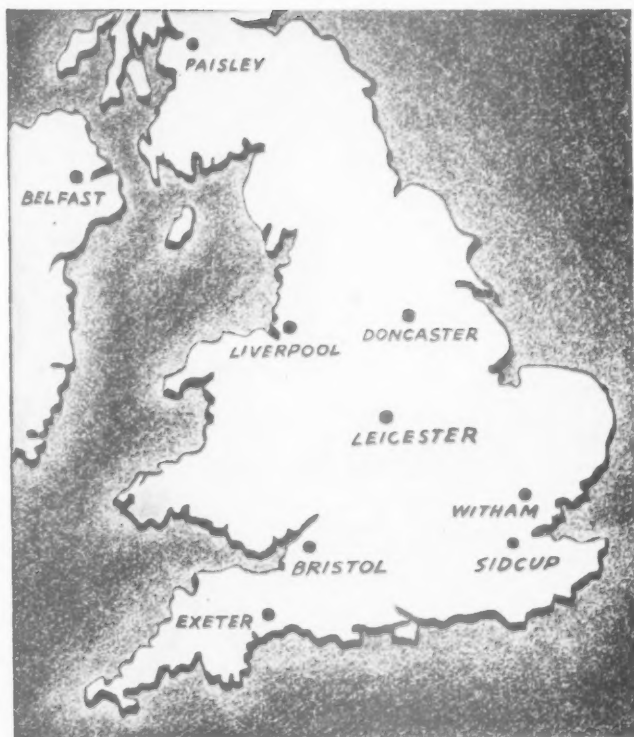
DUTCH UNCLE

Ordnance Survey Bench Marks

New lists of Bench Marks in Great Britain, describing their location and giving altitudes and National Grid co-ordinates, are in course of preparation by the Ordnance Survey. These lists will normally include the Bench Marks in an area covered by one 1/2,500 National Grid Plan. Where the basic survey is on a smaller scale than 1/2,500 the lists will include the Bench Marks in an area covered by one Six Inch Map or by one 1/25,000 map whichever scale is relevant. No further issues will be made of the present Bench Mark Lists issued for areas covered by 1/25,000 sheets though the data contained in them will be available in the new form.

The prices of the new lists, which may be obtained from the Ordnance Survey, Chessington, Surbiton, Surrey, are: 1/2,500 area lists, 6d; Six Inch area lists, 2s; 1/25,000 area lists, 4s.

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**Industrial
Surgery
for the
Owen
Organisation
DARLASTON**

**ARCHITECT:
LEONARD J. MULTON
F.R.I.B.A.**



THIS surgery is built at the Darlaston (Staffordshire) Works of the Owen Organisation, where 6,000 people are employed. The surgery has a permanent medical staff consisting of doctor, sister-in-charge and nurse assistants, who deal with about 250 patients a day.

In the case of severe injury, first-aid treatment is given in a separate injury room, before the patient is taken to hospital. This arrangement allows the normal flow of patients undergoing examination or treatment to proceed without interruption.

First-aid is only part of the work undertaken; much importance is also attached to after-care treatment, and the prevention of occupational diseases.

The building is planned to allow patients, whether walking or stretcher cases, to enter either from the front or rear. A wide sliding door to the injury room is provided so that a stretcher case may be deposited without awkward manoeuvring.

The doctor's consulting room is planned with direct access to the male and female dressing rooms, and is placed opposite to the injury room. There is telephone com-

munication between all parts. Each dressing room has its own lavatory; separate lavatories are provided for the medical officer and staff.

Load-bearing brick is used for the walls, which are built off a reinforced concrete raft. Bricks are sand-faced mixed golden russets, the lime-cement mortar joints are flush wiped.

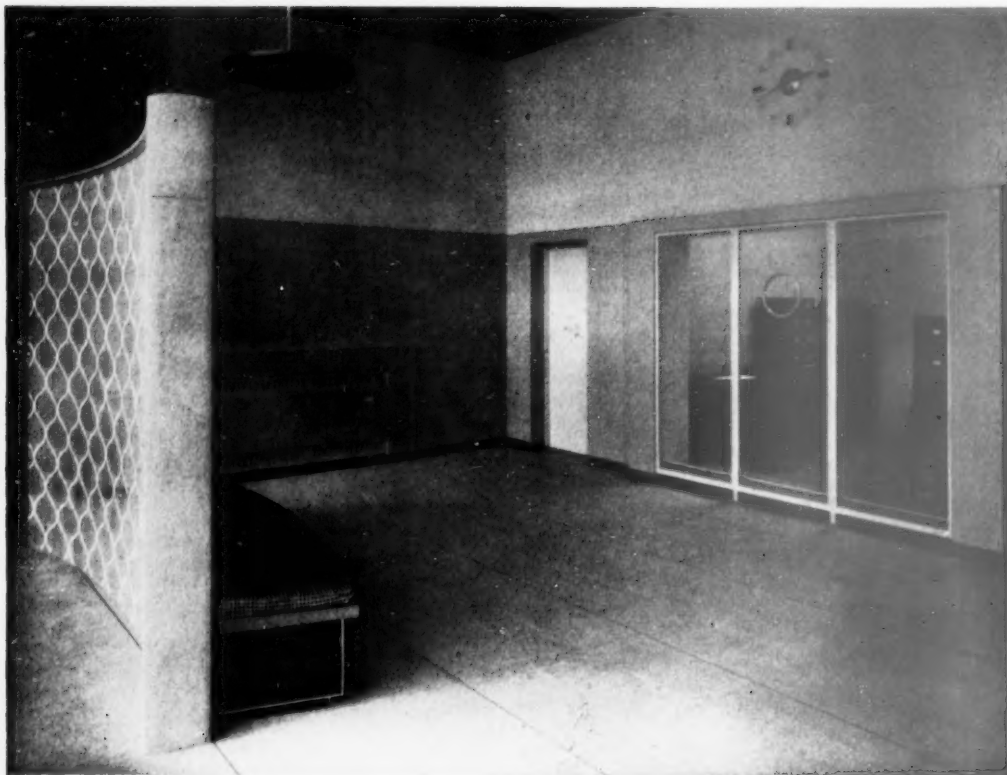
Flat roof is of hollow clay tile construction except over foyer where it is of insulated reinforced concrete. All roofs are asphalted.

The stone panelling on the front is of polished stopped cream travertine; special bonding bricks were used for the termination of the wing wall. Window surrounds and copings are in artificial Weldon Stone.

Front entrance steps and door frame to armour plate doors are in Roman Stone terrazzo.

Windows to all rooms have been set high in the walls, to give uninterrupted wall space below; where necessary, additional lighting is provided by roof domes or lanterns.

Internally the foyer walls are faced with oatmeal-coloured faience to a height of 6ft, the plastered frieze above is



The Foyer, showing curved screen of yellow and white tiles.

painted off-white and the ceiling sea-green. The floor is of terrazzo tiles. Yellow and white hand-painted tiles form the facing of the curved screen behind the entrance doors, which has a terrazzo frame. The treatment of the corridor is similar to the foyer.

Lavatories are tiled, with terrazzo floor and W.C. partitions. Elsewhere all walls are plastered and painted, with floors covered with lino tiles.

All plumbing to foot baths, basins, sinks, water closets, etc., is concealed in wall chases and floor trenches.

All piping is concealed in trenches and was pressure tested and lagged before the trenches were filled and surfaced over with the floor covering.

Quantity Surveyor: A. G. Robottom, Esq., F.R.I.C.S.

General Contractor: McKeand Smith & Co., Ltd.



INDUSTRIAL SURGERY FOR THE OWEN ORGANISATION

Sub - Contractors. — *Reinforced Concrete Floors:* Twisteel Reinforcement, Ltd. *Structural Steelwork:* Rubery Owen & Co., Ltd. *Flat Roofs:* Kleine Co., Ltd. *Reconstructed Stonework:* Empire Stone Co., Ltd. *Asphalte Roofing:* Birmingham Asphalte & Paving Co., Ltd. *Metal Windows:* John Gibbs, Ltd. *Terrazzo:* Marbolino Co., Ltd. *Faience Wall Tiling:* Shaw's Glazed Brick Co., Ltd. *Marble Work:* W. H. Fraley & Sons, Ltd. *Glazed Wall Tiling:* R. G. Robertson (Tiles), Ltd. *Linoleum Tile Floor:* R. W. Purdie & Co., Ltd. *Glass Domes:* Standard Patent Glazing Co., Ltd. *Sanitary Fittings:* J. W. Baker & Co. *Flush Doors:* Southern, Ltd. *Armour Plate Doors:* Pilkington Bros., Ltd. *Door Furniture:* K. S. Neale; *Decorative Tiles:* Supplied by Carter & Co. *Facing Bricks:* Himley Brick Co., Ltd.



Antibiotics factory, Speke, Liverpool

Left : Controlling the
" freeze-drying " process.
Below : Exterior view of the
physiological department.



By courtesy of The Distillers
Company (Biochemicals) Ltd.
Architects : Yates, Cooke & Darbyshire.

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wood or metal frame glazing, and they require no surface treatment or maintenance. Their heat insulation properties are another vitally important feature, reducing heat losses, and so helping to maintain the temperature inside at a constant level regardless of conditions outside.

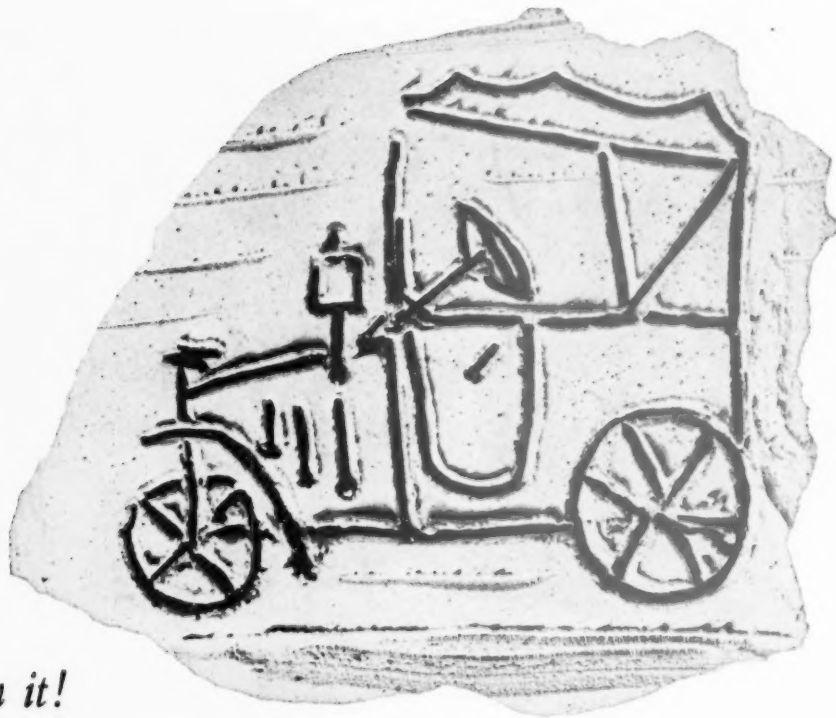
Consult the Technical Sales and Service Department at St. Helens, Lancs., or Selwyn House, Cleveland Row, St. James's, London, S.W.1. Telephones: St. Helens 4001, Whitehall 5672-6.

Send for the free booklet giving fixing details for "INSULIGHT" Hollow Glass Blocks.

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Supplies are available through the usual trade channels. "INSULIGHT" is the British registered trade mark of Pilkington Brothers Limited





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"Exactly, to introduce the advantages of Carlite pre-mixed vermiculite plaster over old-style sand based plaster."

"I should think you architects must find the advantages considerable."

"Overpowering. Because Carlite is pre-mixed plaster, its quality is absolutely controlled at the factory. I know that when I specify Carlite on a job, I'll get exactly what I expect."

"But that would solve a big problem for us contractors too."

"Of course. If an architect specifies Carlite you just give him Carlite. No bother about proportions of sand, or mixing instructions. Or for that matter great heaps of sand disfiguring the neighbourhood."

"How does Carlite come out in use?"

"Top marks. It's tough, and exceptionally resistant to cracking. The fire resistance is very high, and here's something that ought to please you builders, Carlite weighs less than half as much as old style plaster."

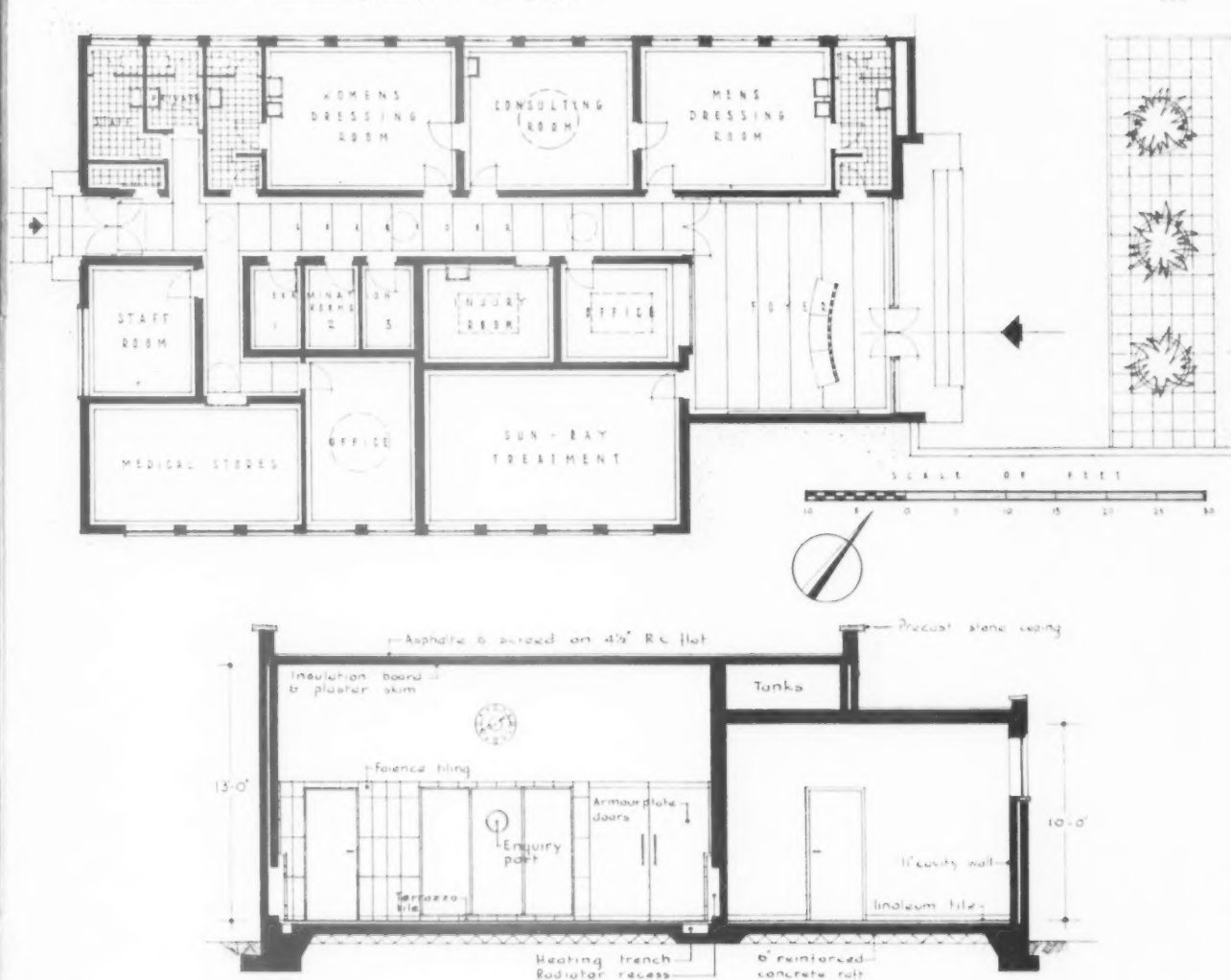
"That certainly would save some elaborate dead load lifting. I'm beginning to see the point of you introducing the subject of progress."

Come and see us at Stand N 273, Building Trades Exhibition
Olympia, Nov. 18—Dec. 2.

Carlite



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The Gotham Company Ltd., Wheeler Gate, Nottingham



INDUSTRIAL SURGERY, PLAN & SECTION.

Leverhulme Research Fellowships, 1954

Application is invited for Fellowships and Grants in aid of research. The Fellowships and Grants are intended for senior workers who are prevented by routine duties or pressure of other work from carrying out research. They are limited to British-born subjects normally resident in the United Kingdom. In exceptional circumstances the Trustees may waive the condition as to residence.

The Trustees are also prepared to consider applications from groups of workers engaged upon co-operative programmes of research particularly from those engaged upon long-distance programmes.

The duration of the awards will not normally extend over more than two years or less than three months and the

amount will depend on the nature of the research and the circumstances of the applicant.

Forms of application may be obtained from the Secretary, Miss M. Branney, Leverhulme Research Fellowships, 3-5, Salisbury Square, London, E.C.4. Telephone: City 1910.

Applications must be received *on or before December 31, 1953*. Awards will be announced in May and will date from September 1, 1954.

Building Wage Claim

Mr. Wilfred Horsfall, President of the N.F.B.T.E., speaking at the Annual Dinner of the Northern Counties Federation of Building Trades Employers at Darlington on October 23, said:

"The operatives in the building industry have decided to submit a claim

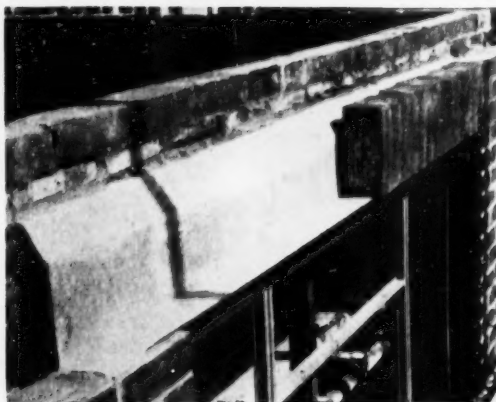
for 9d an hour increase in wages. So little time has elapsed since their last claim for a 6d increase was rejected by the Industrial Disputes Tribunal—and the general situation since then has barely changed—that it is difficult to understand how the operatives can justify the submission of an even higher claim. The more so when it is recalled that their one chance of maintaining full employment in the industry is by helping us keep the cost of building down. Obviously, any increase that may be due under the sliding scale—and this looks like being 1d per hour—will be taken into account when the National Joint Council for the Building Industry come to deal with the wage claim in January. In the meantime we must hope that employers in other industries who will be dealing with wage claims between now and the end of the year will refrain from decisions which might complicate the issue."

MOSAICS



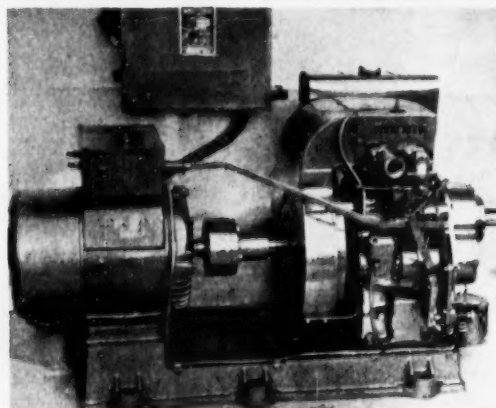
SERVICES
WATER HEATING
B6/12

The Mermaid Automatic Water heater, made by Smith & Wellstood Ltd., Bonnybridge, Scotland. The boiler is fully insulated and will supply 15,000 B.Th.U.'s per hour. There is a thermometer to show the water temperature, which is controlled by an adjustable thermostat. Thermal efficiency around 60 per cent. Cost £26/10/-.



STRUCTURE
MISCELLANEOUS
A12/1

A pressed-steel lintel which serves as a combined angle arch support and damp-proof course has recently been introduced by Dorman Long & Co., Sheet Dept., Middlesbrough. Made in three sizes for varying spans up to 7ft clear, the turn in at the top is wide enough to permit its use with various widths of cavity, from 2in to 2½in.



PLANT
GENERATOR
E13/4

A fully automatic 2 kW. petrol/paraffin generating set by A.C. Morrison (Engineers) Ltd., Cliff Works, Burton-on-the-Wolds, Loughborough. Powered by a Petter, type P.A., 4-stroke, air-cooled, petrol/paraffin engine with a modification which provides automatic changeover from petrol to paraffin after starting. The Generator is self-exciting, self-regulating and directly coupled to the engine.



STRUCTURE
DOORS
A11/7

The "Armourcast" glass door made by Pilkington Brothers Ltd., St. Helens, Lancs., has been designed for internal use only, and is made of ½in rough cast glass which has been toughened. The hinge and lock fittings are in bronze finish. Standard sizes, 78in. by 30in and 33in.

INDUSTRIAL NOTES

● Hills (West Bromwich), Ltd., have recently negotiated a contract in connection with a two-storey school in Toronto, value 300,000 dollars. The main factors which decided the placing of the order were the extremely low number of erection man-hours required and the fact that immediate delivery of all essential components was possible. The whole of the prefabricated steelwork and windows for this school, to the value of 60,000 dollars, were despatched three weeks from receipt of order. The key erectors from Hills (West Bromwich), Ltd., are being flown out to Canada to supervise the erection.

The original recommendation of Hills Presweld System of Construction to the Canadian Education Authorities came from the Development Area Architect, Mr. Macklin Hancock who, on a visit to this country, was greatly impressed by the schools constructed from Presweld Standard Components. The school will have accommodation for 400 pupils and will include thirteen classrooms and two large indoor play centres. The architects of the school are Messrs. Allward & Gounlock of Toronto and the contractors Messrs. Anderson, Smythe & Co. of Toronto.

More than 300 schools have been built to date in Hills Presweld system of construction. In addition to exporting to Canada, the firm are exporting to Australia and it is anticipated that this Canadian contract will be the forerunner of a sizeable school programme in Canada, all in the Presweld system of building.

● The Arcon Group Mission which has been investigating the possibilities of the Canadian market for factory made buildings returned to London on October 16.

Members of the mission—Mr. W. F. Lutyens, chairman of the Arcon Group, Mr. A. M. Gear, consultant designer, and Mr. J. L. Lishman, technical executive of Taylor Woodrow (Building Exports), Ltd.—said the purpose of the visit had been achieved. A thorough investigation had been made on the possibilities and requirements of structures for industrial, agricultural and amenity purposes, including schools and houses.

The information obtained, together with information on geographical and climatic requirements and local preferences, would now be studied. Until members of the Arcon Group had had time to consider the mission's report, no policy statement could be made.

It was felt, however, that there were opportunities for British manufacturers to serve all sections of the Canadian market for all the types of buildings investigated. Structures for industrial purposes appeared to be the most straightforward and were, therefore, likely to be a priority task.

The needs for amenity buildings, especially schools, were great. Much help could be given by the Canadians themselves if they could achieve a greater measure of standard planning and bulk buying, developments which had produced beneficial results both in speed and cost of building in England and elsewhere. In the housing position too, the possibility of supply by British manufacturers was made more difficult by the Canadian desire to achieve variety in housing by introducing into one scheme houses of many different textures and types, rather than by minor architectural variations and methods of site layout, as adopted in the United Kingdom and elsewhere.

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the

CONTRACT • NEWS •

OPEN

BUILDING

BRISTOL C.C. (a) (1) Henbury secondary school; (2) Lawrence Weston primary school; (3) Brislington secondary school. (b) City Architect, Council House, College Green, 1. (c) 2gns each contract, payable to Council. (d) Nov. 12. (e) (1) in December; (2) Jan. 15; (3) Jan. 12.

CARSHALTON U.C. (a) Reinforced concrete civil defence building. (b) Council's Clerk, Council Offices, The Grove. (d) Nov. 11; with details of experience, capacity and availability and plant, and labour force.

DOLGELLEY R.C. (a) (1) 6 houses; (2) construction of site works, including sewer and sewage disposal works. (b) Council's Architect, Victoria Buildings. (c) 2gns. (e) Nov. 13.

DORCHESTER B.C. (a) Block of flats, Coburg Road, Middle Farm Estate. (b) L. Mangus Austin, Bowling Alley Walk. (c) 2gns. (e) Nov. 24.

ENFIELD U.C. (a) 9 3-storey flats at junction of Hertford Road and Holly Road. (b) Engineer and Surveyor, 7, Little Park Gardens. (c) 2gns. (d) Nov. 9. (e) Nov. 26.

ESSEX C.C. (a) Pair of farmworkers' cottages and alterations to farmhouse and cottage, Bower Farm, Havering-Atte-Bower, near Romford. (b) County Land Agent, 69, Duke Street, Chelmsford. (e) Nov. 17.

FAVERSHAM B.C. (a) 2 blocks of flats (24 dwellings). (b) Borough Surveyor, Municipal Offices. (c) 2gns. (e) Nov. 24.

GLOUCESTERSHIRE C.C. (a) Extension to Downend School. (b) County Architect, Shire Hall, Gloucester. (c) 2gns. (a) Nov. 11.

GRAVESEND B.C. (a) 60 houses (Scheme 5T), Westcourt Estate. (b) Borough Engineer, 6, Woodville Terrace. (c) 2gns. (e) Nov. 23.

HAMBLEDON R.C. (a) 12 dwellings, Hartsgrove site, Chiddingfold. (b) Engineer and Surveyor, Council Offices, Bury Fields, Guildford. (c) 3gns. (e) Nov. 18.

HEMSWORTH U.C. (a) Contract No. 1, 3½ houses in pairs, Highfields No. 2 site. (b) Council's Clerk, Council Offices, White Hall, Hemsworth, near Pontefract. (c) 2gns. (d) Nov. 7. (e) Nov. 28.

HITCHIN U.C. (a) 52 houses, Westmill Estate. (b) Council's Surveyor, Council Offices, Brand Street. (c) 2gns. (e) Nov. 23.

ISLE OF WIGHT STANDING JOINT COMMITTEE. (a) (1) police house at Steyne Road, Bembridge; (2) 2 Police houses and a pair of police houses at Castle Road, Newport. (b) County Architect, County Hall, Newport, I.W. (c) 2gns each contract. (e) Dec. 3.

address it is the same as the locality given in the heading. (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked ★ are given in the advertisement section.

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LLANFYLLIN R.C. (a) 6 houses, with site works, on a site near Cross Lanes, Llanstiffraid (Deytheur). (b) R. Arthur Jones, High Street. (c) 2gns. (e) Nov. 17.

MEDWAY CIVIL DEFENCE COMMITTEE. (a) An underground control centre at Gillingham. (b) Borough Engineer, Municipal Buildings, Gillingham. (c) 5gns. (e) Nov. 23.

MERIONETH E.C. (a) 2 classrooms and a canteen kitchen at the Girls' Grammar School, Bala. (b) County Architect, County Offices, Lombard Street, Dolgelly. (c) 3gns. (e) Nov. 21.

MOSSLEY B.C. (a) 26 houses and 12 flats, Micklehurst site. (b) Messrs. Howard and Benson, 88, Mosley Street, Manchester, 2. (c) 2gns. (e) Nov. 16.

NEWTON AND LLANIDLOES R.C. (a) 6 houses at Llangurig, near Llanidloes. (b) Walter B. Bond, Windsor House, 49, Calthorpe Road, Edgbaston, Birmingham, 15. (c) 2gns. (e) Nov. 30.

N. IRELAND—GOVERNMENT OF NORTHERN IRELAND. (a) Canteen extension and site works at the Ministry of Commerce factory, Limavady, Londonderry. (b) Ministry of Commerce (Room 28), Chichester House, Chichester Street, Belfast. (c) 3gns. (e) Nov. 16.

N. IRELAND—NEWTOWNARDS B.C. (a) 7 terrace dwellings, with site works and services, Movilla Street. (b) Town Clerk, Town Hall. (c) £3. (e) Nov. 24.

PICKERING U.C. (a) 10 houses at Westgate site. (b) Messrs. Needham, Thorp and White, 6, High Petergate, York. (c) 2gns. payable to Council. (e) Nov. 23.

ROCHDALE B.C. (a) Secondary school at Spotland. (b) Borough Surveyor, Town Hall. (e) Dec. 3.

SAFFRON WALDEN R.C. (a) 30 houses, first section of site works, service road, sewers, etc., Elsenham, Essex. (b) Council's Clerk, Council Offices, Debden Road. (e) Nov. 21.

ST. ALBANS R.C. (a) 54 dwellings, comprising 16 flats in four blocks, 16 pairs of houses, and 6 aged persons' dwellings in 2 blocks at Langley Grove Estate, Sandridge, near St. Albans. (b) Council's Architect, 43, Upper Lattimore Road. (c) 2gns. (e) Nov. 23.

SWANSEA B.C. (a) Crematorium at Morriston. (b) Borough Architect, The Guildhall. (c) £5. (d) Nov. 12.

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SLOUGH B.C. (a) Contract No. 7. Construction, completion and maintenance of a brick pumping station with reinforced concrete roof at Chalvey. (b) Borough Engineer, Town Hall. (c) 2gns. (e) Nov. 16.

STONE U.C. (a) 68 dwellings, Lichfield Road site. (b) Messrs. Edward Forshaw and Greaves, The Old White Hart, Trinity Street, Hanley, Stoke-on-Trent. (c) 3gns.

WAINFORD R.C. (a) Building work for a pumping station and treatment works at Barsham, near Beccles. (b) Messrs. A. P. I. Cotterell and Son, 54, Victoria Street, London, S.W.1. (c) 3gns. (e) Nov. 30.

WAKEFIELD C.C. (a) 142 houses and flats, comprising (1) 36 flats and (2) 106 houses, Kettlethorpe Estate. (b) City Engineer, Town Hall. (d) Nov. 9.

WELLINGBOROUGH U.C. (a) Block of 12 shops, maisonnettes, flats and public conveniences, Croyland Hall Farm Estate. (b) Messrs. Blackwell, Storry and Scott, Gold Street Chambers, Kettering. (c) 2gns. (e) Dec. 11.

WEST MERSEA U.C. (a) Construction of road and sewer works and erection of 5 pairs of houses, Windsor Road. (b) Messrs. Sparrow and Clater, 7, North Hill, Colchester. (c) 2gns. (d) Nov. 12. (e) Nov. 27.

WEST RIDING C.C. (a) Sub-divisional police headquarters and 5 constables' houses and a senior officer's house, Manor Lane, Shipley. (b) County Architect, "Bishopgarth," Westfield Road, Wakefield. (c) 2gns. (e) Nov. 24.

YORK C.C. (a) 7 blocks of 8 aged persons' dwellings, Moor Lane Estate. (b) City Architect, 8, St. Leonard's Place. (c) £3. (e) Nov. 28.

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LONDON—WANDSWORTH B.C. The Council is preparing an approved list of contractors to undertake building or maintenance works to municipal properties (not housing repairs) at a value not exceeding £3,000. Applications to Town Clerk, Municipal Buildings, London, S.W.18, by November 20th, with technical and financial referees.

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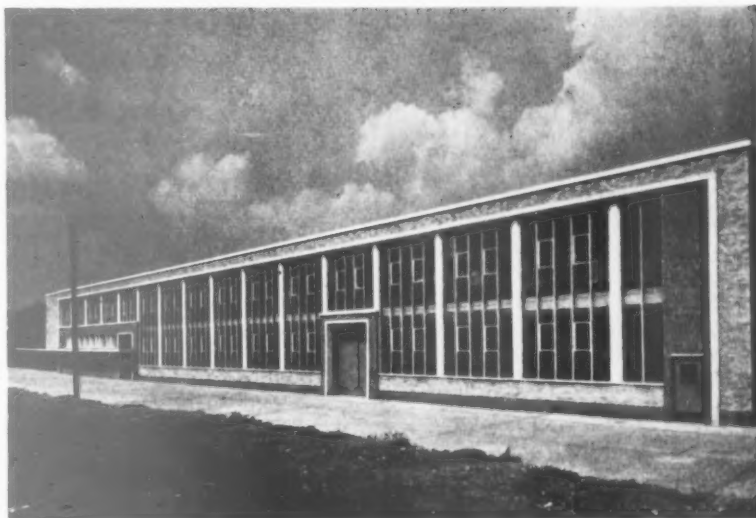
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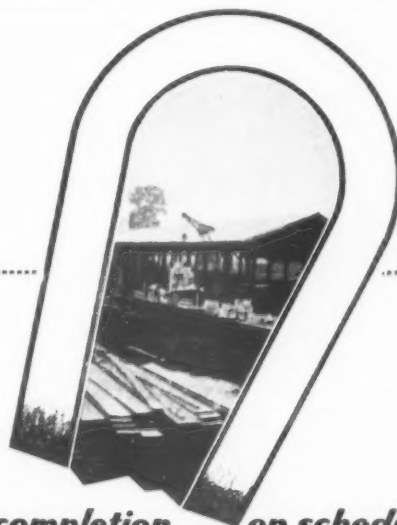
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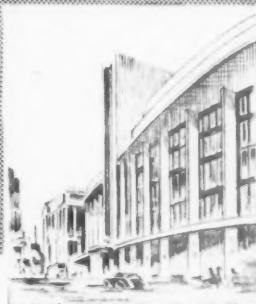
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LANCASHIRE COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

APPLICATIONS are invited for the following appointments on the permanent staff:

- (a) ASSISTANT LAND SURVEYORS, A.P.T. Grade V, £595-£645.
 - (b) SENIOR ASSISTANT QUANTITY SURVEYOR, A.P.T. Grade VII, £710-£785.
- Application forms, to be returned by November 21st, 1953, obtainable from the County Architect, County Hall, Preston. [7401]

LONDON ELECTRICITY BOARD require in Central London STRUCTURAL ASSISTANTS having experience in design and detailing of reinforced concrete heavy foundations, framed superstructures and other structural works; STRUCTURAL DRAUGHTSMEN having experience in detailing reinforced concrete structures. Salaries N.J.B. Grade 5 or 6 (£595-£704 or £458-£595 p.a. incl.); ARCHITECTURAL DRAUGHTSMAN, experienced. Salary N.J.B. Grade 6 (£458-£595 p.a. incl.). Application forms from Establishments Officer, 46, New Broad St., E.C.2, returnable by 21st November, 1953. Please enclose addressed envelope and quote ref. V/1683/AA. [7408]

CITY OF BIRMINGHAM EDUCATION COMMITTEE.

APPLICATIONS are invited for the following appointment to the Architect's Branch of the Education Department (Architect to the Committee: Mr. J. R. Sheridan-Shedden, A.R.I.B.A.). SENIOR ASSISTANT ARCHITECT: Salary A.P.T. VIII (£760-£825-£835).

Applicants must be registered and chartered architects, and must have had considerable experience in the design and erection of large buildings, preferably of schools, and must offer evidence of high ability and initiative in design.

Application forms, which may be obtained (s.a.e.) from the undersigned, must be returned not later than 16th November.

E. L. RUSSELL,
Chief Education Officer.

General Purposes Branch,
Education Office,
Margaret Street,
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BINGLEY URBAN DISTRICT COUNCIL.

APPOINTMENT OF CHIEF ARCHITECTURAL ASSISTANT.

APPLICATIONS are invited for the permanent appointment of CHIEF ARCHITECTURAL ASSISTANT. Salary Grade V, commencing at £595 per annum, rising by three annual increments to £645 per annum.

Candidates should have had considerable training and experience in housing design, development and general architectural work. Preference will be given to candidates who have passed the examinations of the Royal Institute of British Architects.

The appointment will be terminable by one month's notice on either side and subject to the provisions of the Local Government Superannuation Act, 1937.

Applications, stating age, qualifications, training and experience, and details of past and present appointments, accompanied by copies of three recent testimonials, should be forwarded, endorsed "Architectural Assistant" to the undersigned before the 23rd November, 1953.

The Council is unable to provide housing accommodation.

F. M. DUNWELL,
Clerk of the Council.

Town Hall,
Bingley. [7415]

APPOINTMENTS—contd.

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(ii) PLANNING ASSISTANT (Salary £460-£565). Must have planning and architectural experience.

Apply, giving age, qualifications, appointments held, and two referees, to County Clerk, County Offices, Kirkcudbright, by 16th November, 1953. [7412]

CITY AND COUNTY OF NEWCASTLE UPON TYNE.

CITY ARCHITECT'S DEPARTMENT.

APPLICATIONS are invited from suitably qualified persons for the following vacancies on the permanent staff:—

(a) SENIOR ASSISTANT ARCHITECTS in A.P.T. Division, Grade VI (£670-£735).

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Applications stating position applied for, age, particulars of training, qualifications, experience, present and past appointments, together with copies of two recent testimonials, or the names and addresses of two persons to whom reference may be made, should be addressed to George Kenyon, A.R.I.B.A., A.M.T.P.I., City Architect, 18, Cloth Market, Newcastle upon Tyne, 1, to be received not later than Saturday, 21st November, 1953.

JOHN ATKINSON,
Town Clerk.

Town Hall,
NEWCASTLE UPON TYNE, 1.
30th October, 1953. [7416]

COUNTY BOROUGH OF ST. HELENS.

BOROUGH ENGINEER'S DEPARTMENT.

APPLICATIONS are invited for the appointment on the permanent establishment of a PLANNING ASSISTANT A.P.T. Grade V (£595-£645 per annum).

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Candidates must, when making applications, disclose in writing whether to their knowledge they are related to any member of the Council or holder of any senior office under the Council.

Applications, stating age, qualifications, present and past appointments, and details of experience, accompanied by copies of three recent testimonials, must be forwarded to the undersigned not later than MONDAY, 16th NOVEMBER, 1953.

Canvassing in any form will be deemed a disqualification.

M. WARD, M.I.M.U.E., A.M.T.P.I.,
Borough Engineer.

Town Hall,
St. Helens.
21st October, 1953. [7417]

APPOINTMENTS—contd.

LANCASHIRE COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

APPLICATIONS are invited for the following permanent appointment:—

SENIOR ASSISTANT QUANTITY SURVEYOR, A.P.T. Grade VIII (£760-£835 per annum).

Application forms, to be returned by Saturday, November 21st, 1953, obtainable from the County Architect, County Hall, Preston. [7418]

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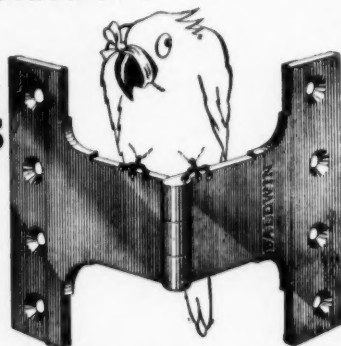
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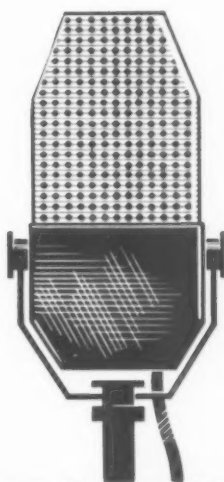
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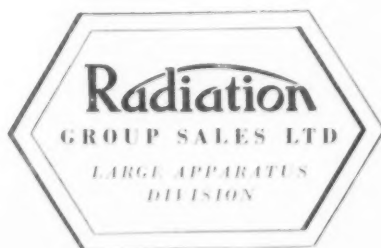
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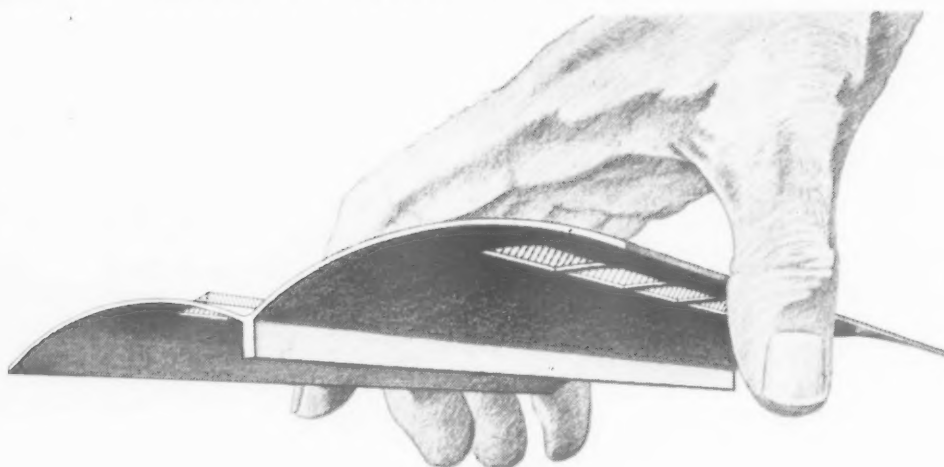
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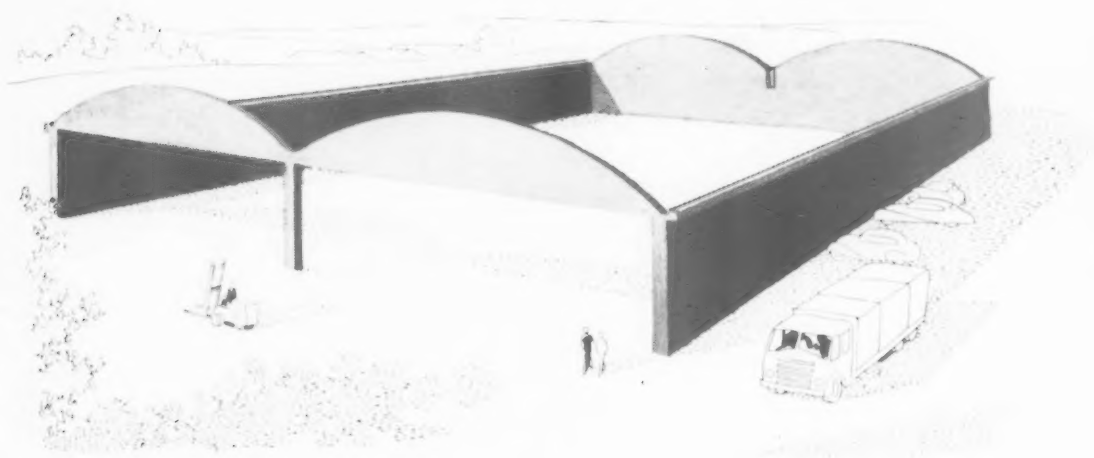


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